PROVINCE OF BRITISH COLUMBIA

MINISTRY OF FORESTS

HON. T. M. WATERLAND, *Minister* E. L. YOUNG, *Chief Forester and Chief Executive Officer*

# REPORT

## *of the*

# FOREST SERVICE

YEAR ENDED DECEMBER 31, 1977

Printed by K. M. MACDONALD, Printer to the Queen's Most Excellent Majesty
in right of the Province of British Columbia.
1978

VICTORIA, B.C., MAY 10, 1978

*Colonel the Honourable* WALTER S. OWEN, Q.C., LL.D.,
*Lieutenant-Governor of British Columbia.*

MAY IT PLEASE YOUR HONOUR:

Herewith I respectfully submit the Annual Report of the Forest Service for 1977.

T. M. WATERLAND
*Minister of Forests*

April 28, 1978

*The Honourable T. M. Waterland,*
*Minister of Forests,*
*Victoria, B.C.*

SIR—This is the Annual Report of the Forest Service for 1977.

E. L. YOUNG
*Chief Forester and*
*Chief Executive Officer*

# CONTENTS


| | PAGE |
|---|---|
| Forest Service Directory | 6 |
| Forest Service Organization | 7 |
| Chief Forester's Report | 8 |
| Administrative and Support Services Program | 9 |
| Resource Management Program | 12 |
| Reforestation Program | 13 |
| Research Program | 15 |
| Forest Protection Program | 15 |
| Fire Suppression Program | 16 |
| Inventory Program | 16 |
| Range Management Program | 17 |
| Forest Development Roads Program | 17 |
| Reservoir Waterway Improvement Program | 18 |
| Appendix (Statistical Tables) | 19 |

# FOREST SERVICE DIRECTORY

*Executive Committee*

E. L. YOUNG, Chief Forester and Chief Executive Officer, Victoria
R. W. ROBBINS, Assistant Chief Forester (Operations), Victoria
W. YOUNG, Assistant Chief Forester (Resource Management), Victoria
P. J. J. HEMPHILL, Director of Services, Victoria
J. E. MILROY, Director, Range Branch, Victoria

*Staff Consultant*

J. A. K. REID

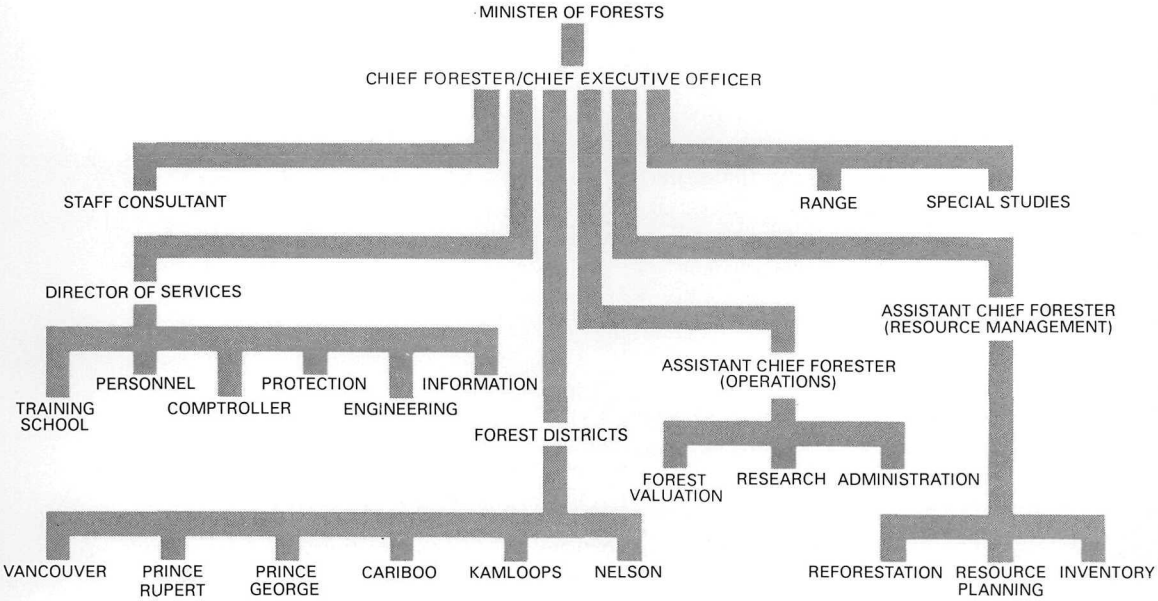
*Staff Division Heads*

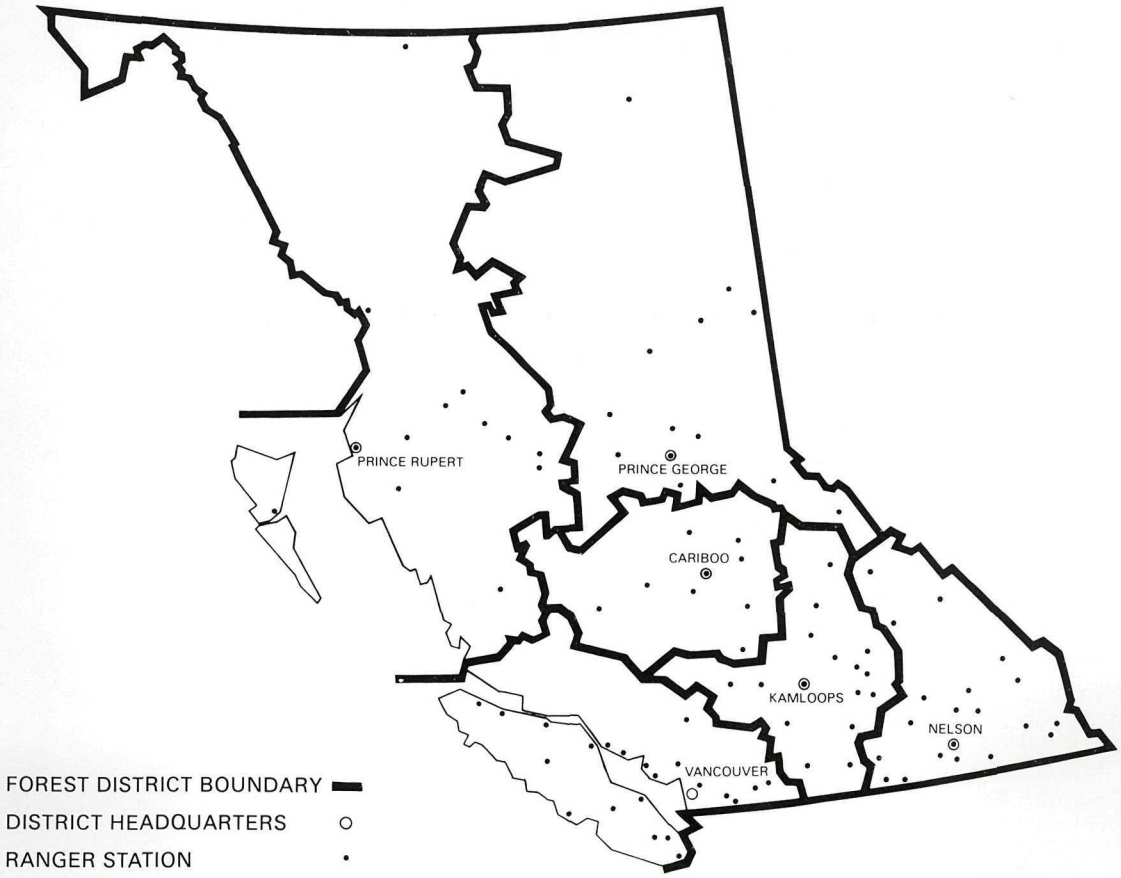
J. B. BRUCE, Forester-in-charge, Reforestation Division, Victoria
J. H. CARRADICE, Director, Forest Service Training School, Surrey
D. R. GLEW, Forester-in-charge, Inventory Division, Victoria
C. J. HIGHSTED, Forester-in-charge, Resource Planning Division, Victoria
E. KNIGHT, Manager, Special Studies Division, Victoria
L. W. LEHRLE, Forester-in-charge, Engineering Division, Victoria
R. W. LONG, Ministry Comptroller, Victoria
E. H. LYONS, Forester-in-charge, Information Division, Victoria
D. H. OWEN, Forester-in-charge, Protection Division, Victoria
A. B. ROBINSON, Forester-in-charge, Administration Division, Victoria
R. D. THOMAS, Forester-in-charge, Valuation Division, Victoria
L. G. UNDERWOOD, Personnel Officer-in-charge, Personnel Division, Victoria
G. C. WARRACK, Forester-in-charge, Research Division, Victoria

*District Foresters*

W. G. BISHOP, District Forester, Vancouver
A. H. DIXON, District Forester, Kamloops
M. G. ISENOR, District Forester, Prince George
J. R. JOHNSTON, District Forester, Nelson
A. C. MACPHERSON, District Forester, Prince Rupert
E. W. ROBINSON, District Forester, Cariboo

# FOREST SERVICE ORGANIZATION



## CHIEF FORESTER'S REPORT

The financial picture for 1977 was encouraging, with a forward trend which by year's end showed every indication of continuing. Encouragement was provided by a promising upswing in housing starts both in Canada and the United States . . . together with a devalued Canadian dollar.

Total revenue from stumpage and other forest resource sources was $83,-500,169, which compares with $63,018,456 in 1976.

Amounts charged against logging operations totalled $85,544,601, an increase of 28.5 per cent over the previous year.

Following the appointment of John S. Stokes, Deputy Minister of Forests, to the Forest Policy Advisory Committee in January 1977, the Chief Forester assumed additional duties as Chief Executive Officer.

Throughout the entire year members of the Forest Policy Advisory Committee carefully studied the 1976 report submitted by forest economist Dr. Peter Pearse, whose one-man Royal Commission looked into practically all aspects of British Columbia's forest resources. By year's end the committee had almost completed its work—a new *Forest Act,* a *Ministry of Forests Act,* and a new *Range Act.* All three are scheduled for presentation to the legislature in the spring of 1978.

The year also saw a substantial increase in the timber harvest. A cut of nearly 25 million cunits was recorded—a record for the Province.

The market was strong, but because of an oversupply of low-grade logs and chips the Forest Service continued to administer modified utilization standards in the Interior and optional utilization standards on the coast.

Approximately six million cunits were sold through the bid proposal format which requires a written submission, with bidding for cutting rights rather than on the stumpage. More than 800,000 cunits were sold in the form of small competitive sales.

A significant development in forest inventory during 1977 was the initiation of a three-year program designed to convert the present timber inventory to a multiple-use concept. It will attempt to identify resource values other than timber where such values affect either the availability of the timber for harvesting, or indicate whether a higher level of forest management is warranted because of other resource values. The task will be streamlined through the acquisition of a computerized mapping system.

Our reforestation program saw nearly 66 million seedlings planted on an area of more than 60 000 hectares—approximately 25 million by the Forest Service, and 41 million by various companies. This drop of some 7 million seedlings from the 1976 figure was due to several factors. Unusual weather caused heavy losses in the Interior nurseries and unusually heavy "turn backs" by some companies were attributed to poor economic conditions. Further, weather conditions of 1975 and 1976 restricted site preparation work which in turn resulted in a lack of suitable planting areas in 1977.

A trend which commenced several years ago in our forest protection program gained added emphasis in 1977. It sees almost equal attention, and concern, devoted to destruction caused by insects and disease. Our protection personnel estimate these pests each year are now killing a volume of wood equal to one-third of the Province's annual cut.

Despite a series of high to extreme hazard conditions, the forest fire picture for the year was a good one. There were 1,854 fires reported, averaging 2.04 hectares

in size. Compared to the 10-year average of 33.94 hectares. This substantial decrease was attributed largely to fast initial attack.

The Service's ecological classification project was extended to the Kamloops and Nelson Forest Districts. It is hoped to complete the program in developed parts of the Province within five years.

The year saw a substantial increase in the work load of our Range Branch following commencement of the Land Management Branch, Ministry of the Environment, referral of all grazing lease renewals to the Forest Service's range organization. It was in keeping with the Government's decision to have a single ministry responsible for the forage resource.

A highlight of the resource planning program was a major expansion in preparation of resource folios and co-ordinated resource plans. Close to 130 such plans were developed for controlling timber harvest, improvements to range, integrating use of forest land, and prevention of damage to the environment.

Our forest recreation program continues to grow. It became operational in 1972 and by the end of that year there were 286 recreation sites throughout the Province. Today, there are more than 1,000, and in 1977 they were enjoyed by an estimated 1,418,000 people—most of them residents of British Columbia.

Our internal and external information program saw continuation of the increasingly popular quarterly magazine *ForesTalk;* and the introduction of a new Forest Service newsletter. The photographic section produced one training film and one half-hour documentary film.

## ADMINISTRATIVE AND SUPPORT SERVICES PROGRAM

### SPECIAL STUDIES

A major part of Special Studies Division's attention has been directed toward the resolution of resource use conflicts. Studies completed included "Management Opportunities on the Sayward Forest," identifying opportunities and conflicts among the various resources and proposing solutions, and a cost-benefit analysis for the "Evaluation of the Western Spruce Budworm Problem in British Columbia."

Other projects included reviews of the economics of Forest Service marine activities, of the relative benefits of various reforestation projects, of the organization and procedures of the Engineering Division and a similar review of the Kamloops District Administration section. The main purpose was to detect various inefficiencies and assist in their resolution.

### SYSTEMS GROUP

In April 1977 the Systems Group moved to new quarters with modern facilities enabling them to make effective use of the Government's computers.

The Systems Group co-ordinates activities between the Forest Service and the new B.C. Systems Corporation and is working with the corporation to define the computing functions of the two agencies.

Of particular note was the removal of the IBM 1440 from Vancouver and the installation in Victoria of a computer mapping system for the inventory program.

A Province-wide accounts receivable system, a weigh-scale system, and a cruising program were all implemented in 1977.

The Systems Group is working with the Computer Uses Committee to develop a five-year plan which will take advantage of new technology and new systems.

## PRODUCTIVITY OPERATIONS

A new five-year plan was developed and included expansion and an improved organization.

Work continued on the development of growth models, efficient sampling methods, expanded and updated data base, analysis of fertilizing and thinning trials and in testing the economic efficiency of silvicultural treatments.

## VALUATION

In May 1977 the calculation of scaled volumes and the issuance of accounts were transferred from district offices to the Victoria computer. This was the result of an analysis begun in 1976. All of these systems provide for a change to metric measurement in 1978.

In order to provide all users with the same basic information, a new metric cruise compilation program was completed together with a new cruising manual. This package will be introduced to the industry in 1978. These new procedures will ensure accountability, efficiency, and accuracy.

The development of a logging equipment cost schedule was commenced. It is designed to provide costs for analysing productivity of equipment. District staff are studying equipment productivity on various forest sites and using this information, the Valuation Division is developing a system for rating logging chances throughout the Province.

The Joint Interior Product Outturn Committee commenced a two-year study of lumber yields from Douglas-fir and a study of lumber recovery from decadent cedar was completed.

## MANAGEMENT ENGINEERING

Province-wide log haul studies were carried out.

## COMMUNICATIONS

Fifteen communication shelters, 12 repeater installations, 5 lightning protection projects, and 28 repeater-site radio coverage surveys were completed.

The first solar-powered automatic repeater station was established west of Quesnel. It promises long-term savings compared to the disposable batteries used in other installations.

## FOREST SERVICE MAINTENANCE DEPOT

Progressive maintenance of the depot facilities, equipment overhauls and refits to 26 launches and repairs of 48 launches, were completed. In addition, some 4,000 units were assembled and tested, and transport pool vehicles travelled a total of 221,000 miles.

## PUBLIC INFORMATION SERVICES

Activities of the Information Division continued at a hurried pace during 1977, with a dramatic increase in both internal and external communications planning.

Two new 16-mm films were completed, "The Model Planter," a training film illustrating the methods of planting seedlings and "One Jump Ahead," an information film explaining the Mountain Pine Bettle problem in the Prince Rupert Forest District and the methods used to contain the infestation. The principles shown are applicable throughout the Province.

Co-operative work continued with the Western Education Development Group at UBC. Two forestry teaching guides were completed, "Seeing Through the Trees,"

and "There's Dirt in the Forest." Thirty elementary schools in various regions of the Province participated in the final testing of a "Forest Resource Management Game." Production and marketing of the game should begin late 1978.

*ForesTalk* resource magazine continued in popularity. With a circulation in excess of 80,000, *ForesTalk* has an estimated audience of over 225,000 readers.

Several publications were completed for use by field personnel. Of particular interest were "The Renewable Resource," a 40-page colour brochure illustrating one complete cycle of a managed forest, and "Who We Are and Where to Find Us," an informative directory of Forest Service programs, offices, and operations. A new series of fact sheets titled "Forestopics" was started. Covering all aspects of forestry, this series will be in full production by mid-1978.

With the implementation of the Provincial Government's Visual Identity Program, the Division completely redesigned all Forest Service signs. Full-scale production of new signs should begin as early as next year.

Gregson Graham Ltd., a private communications and marketing firm, were commissioned to undertake a Province-wide study of the information function within the Forest Service, as it relates to the news media, industry, schools, and special interest groups. Their findings and recommendations will assist the Forest Service to enhance and greatly improve its communications.

An updated version of the Forest Service newsletter was started. Published monthly, the newsletter will help improve communications within the service.

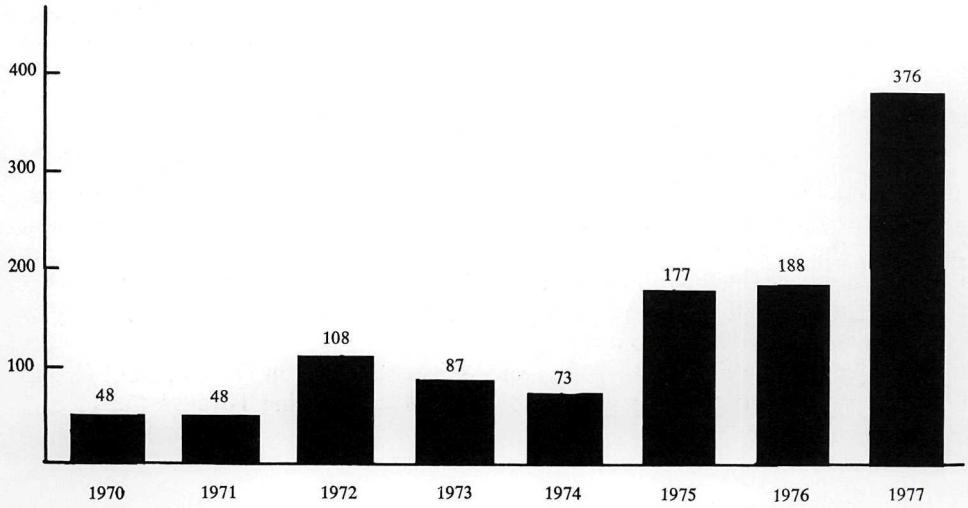
## FOREST SERVICE TRAINING SCHOOL

A training advisory committee of district and divisional representatives was formed and provided guidance and direction for the Provincial training program. As a result of its deliberations, the training program has been broadened. In 1977, 18 courses were held, compared to eight in 1976.

During 1977, 2.91 per cent of Ministry staff time was spent on training, 1.31 per cent administered by the school, and an additional 1.60 per cent committed to district/divisional programs. This is below the industrial average.

Planning toward a comprehensive staff training and development program was commenced. This includes an analysis of long-term manpower needs, career path identification, and the development of an organized schedule of courses to satisfy the long-term needs of training at all levels.

*Number of Students Attending Courses at Forest Service Training School*



## RESOURCE MANAGEMENT PROGRAM

During the year, 90 folios and 40 co-ordinated resource plans were completed at the subunit level to provide for the integrated use of forest land.

Plans were initiated for at least one PSYU in each forest district. Of these, unit plans for the Smithers, Barton Hill, and Creston PSYU's are nearing completion.

Forest Service personnel participated in a multi-agency land use plan for the Prince George Special Sale Area.

The Resource Planning Division initiated analysis of "timber supply regions" throughout the Province. Procedures are being formulated for a multi-agency supply and demand approach to regional planning.

Public involvement has been stressed at all levels of planning, with public meetings, public advisory committees, and public "write in" procedures established. There have been a number of planning meetings with community watershed users. Annual reviews for 32 PSYU's were prepared by districts, and distributed to environmental groups and other interested persons throughout the Province.

In Victoria, planning staff have concentrated on the formats for subunit, unit, and regional plans, a planning handbook, involvements with the environmental protection area program, investigations for the Forest Policy Advisory Committee, and the resolution of conflict areas with other agencies.

Using the computer, 20 allowable cut calculations were completed. Good progress was made toward bringing the CARP system into operational use. A basic version of this system was used in the regional timber supply analysis and will be available for operational use by April 1978. The Resource Planning Division continued to provide leadership in the application of mathematical programming and computers to timber supply operations.

### FOREST RECREATION

Public recreational use of forests and wildlands continues to grow steadily. At the end of 1977, there were 1,007 sites under Forest Service maintenance. Visitors to these sites totalled 1,418,000, with the great majority, as in previous years, being Provincial residents. A total of 1 793 kilometres of developed trail and several canoe routes also helped to disperse users to the more remote wildland areas. The trail network will be expanded as other priorities allow.

Projects in 1977 included participation in designating environmental protection areas, continuation of trail inventory, recreation features inventory, and visual sensitivity mapping. Input was provided for a number of unit and subunit plans.

*Forest Recreation-site Record*

| Forest District | 1975 | | 1976 | | 1977 | |
|---|---|---|---|---|---|---|
| | Sites at Year-end | Visitors | Sites at Year-end | Visitors | Sites at Year-end | Visitors |
| Cariboo | 136 | 58,000 | 145 | 85,400 | 142 | 134,000 |
| Kamloops | 233 | 230,000 | 233 | 550,000 | 247 | 605,000 |
| Nelson | 174 | 87,000 | 236 | 94,500 | 225 | 92,000 |
| Prince George | 137 | 166,000 | 153 | 150,000 | 165 | 163,000 |
| Prince Rupert | 53 | 18,000 | 50 | 38,400 | 71 | 80,000 |
| Vancouver | 150 | 335,000 | 153 | 305,000 | 157 | 344,000 |
| Totals | 883 | 894,000 | 970 | 1,223,300 | 1,007 | 1,418,000 |

A recreation handbook for staff guidance, and a regulation dealing with control measures at recreation-sites were prepared and are under review. A site record punch-card system covering all Forest Service Sites was completed.

A position for a Landscape Forester was advertised and filled.

## REFORESTATION PROGRAM

In 1977, nearly 66 million seedlings were planted on an area of over 60 000 hectares by all agencies—approximately 25 million by the Forest Service and 41 million by various companies. This was a drop of nearly 7 million from 1976. There were several contributing factors. Unusual winter weather resulted in heavy losses in the Interior nurseries. There were also a number of unusually heavy turn backs by some companies that were attributed to a downturn in economic conditions. Weather conditions in 1975 and 1976 that restricted the amount of site preparation meant a lack of suitable planting areas in 1977.

The Forest Service awarded 233 contracts to independent planters, and undertook 139 planting projects itself.

Some 25 000 hectares were prepared for planting and over 23 000 hectares were prepared for natural regeneration. To maintain suitable stocking levels and promote faster growth of immature stands, 2 827 hectares were brushed out and juvenile spacing was implemented on 6 811 hectares—in addition, 95 hectares were thinned for commercial-size timber. To control tree-damaging dwarf mistletoe, 2 667 hectares were treated by removing infected trees.

Forest Service crews in all forest districts examined 131 126 hectares of logged and (or) burned forest land and found that 78.5 per cent were satisfactorily stocked. Various companies similarly examined 40 975 hectares and found that 54.3 per cent were satisfactorily stocked. Summation of Forest Service and company results indicated that 72.7 per cent of the area examined was restocked.

To determine survival of planted seedlings, 13,395 new plots were established and 24,407 plots were remeasured. Maintenance was carried out on 133 kilometres of access roads leading to reforestation projects and a further 6.75 kilometres of new roads suitable for four-wheel drive access were constructed.

In the Kamloops Forest District a major rehabilitation program of bunching and burning in preparation for planting was continued on reverted timber berth lands at Hidden Lake near Enderby. In the Nelson Forest District, a further one million trees were planted on 748 hectares in the area of the 1971 "Sue" fire north of Golden.

Initial observations of winter buds indicate that a potential crop of cones exists for the 1978 crop-year. A full program of bud sampling has therefore been planned for early 1978 in order to determine the location of likely crops. Seed is in extremely short supply for some provenances; precluding nursery production for planting stock.

### NURSERY OPERATIONS

Sowing in the nurseries in 1977 was maintained at the level of the last three years to produce 80 million seedlings. Sowing for container grown stock accounted for one-third (27 million), while the bareroot sowing was scheduled to produce the balance of 53 million seedlings. Approximately 14 million seedlings of various species and stock types were transplanted in the spring of 1977.

During one of the most unusual winter weather cycles on record, there was nearly a complete absence of snow-cover at all nurseries producing Interior bareroot stock. This resulted in serious losses of 1-year-old seedlings, principally spruce,

because of frost-heaving. At Red Rock Nursery in the Prince George Forest District, frost-heaving caused severe reduction in inventory levels and root deformation in residual seedlings, ultimately resulting in recovery of less than 20 per cent of plantable quality spruce. Dessication due to freeze-drying was another result of the absence of snow-cover, particularly on lower elevation Interior Douglas-fir seedlots grown at Skimikin Nursery near Salmon Arm.

Some existing facilities were upgraded to improve the capability of meeting stock standards and species requested. Although container and bareroot stock requests have increased significantly, no new production capacity was developed during 1977; production levels in 1978 will be similar to those in 1977.

## SEED PROCESSING

Due to the cool and wet weather experienced during the spring and summer of 1976, a collectible crop for most species did not materialize in 1977. A total of 684 hectolitres of cones, mainly lodgepole pine, was processed yielding 210 kilograms of seed. Early testing results of the mobile seed processing unit indicate satisfactory performance on Douglas-fir cones, but modifications are being made to handle the cones from spruce and lodgepole pine. Additional seed processing equipment was installed at the Duncan plant to improve the cleaning of seed. A total of 1 343 kilograms of seed was withdrawn from storage for sowing in both bareroot and container facilities.

## SEED ORCHARDS

Initial studies of root pruning in young coastal Douglas-fir seed orchards indicate that this technique holds promise in inducing cone development and thus increasing seed production. A mechanical tree spade was acquired for both transplanting and root-pruning purposes. Other equipment acquisition included a self-propelled unit with a lift bucket to enable booster pollination, pruning, cone harvesting, and other orchard operations. Despite the generally poor seed crop in 1977, coastal Douglas-fir orchards produced a total of 47 hectolitres of cones. However, because of insect depredation of cones and seeds, and poor pollination, the seed yield was very low (0.117 kg/hl compared to 0.507 kg/hl in 1976).

Negotiations were continued for the purchase of suitable land for orchards with good prospects of acquiring 8 hectares on the Saanich Peninsula. The program as a whole, now includes development of orchards of major reforestation species in all forest districts.

## FOREST CAMPS

The Forest Service continued its co-operative programs with the Corrections Branch, Ministry of the Attorney-General, as well as with the Canadian Penitentiary Service, and on almost every program, the number of man-days work contributed by inmates increased over those of 1976. In addition, forestry projects of every description were undertaken involving the Forest Service, Ministry of Human Resources, Canada Manpower, and the Federal *Agricultural Rehabilitation and Development Act.*

## OTHER SILVICULTURAL ACTIVITIES

Studies continued in the development of techniques and equipment to thin young stands to induce better growth. Experience is reducing costs (in one operation, costs were reduced 41 per cent compared to similar operations done in 1976).

The "Site Preparation Guide" was revised with co-operation from the Research and Protection divisions.

Vancouver Forest District staff have developed a guide for classifying *Abies amabilis* seedlings left after logging in order to identify those seedlings which will be likely to grow into useful trees.

Recently developed ecosystem classification systems have helped foresters to make better prescriptions for managing forest land.

## RESEARCH PROGRAM

The ecological classification program was extended to the Kamloops and Nelson Forest Districts. Practical interpretations aimed at improving forestry practices on a site-specific basis were developed in three forest districts and staff training sessions were held in the field. A major program is being prepared to complete ecological classification within the developed parts of the Province within five years.

Progeny testing of Douglas-fir has been increased to a total of 35 test-sites. Selection of 160 more lodgepole pine plus-trees in the Nelson Forest District brings the total to 450 trees. Transferring the breeding of Interior spruces from Prince George to Vernon was successful in increasing the flowering of the test trees. Western hemlock breeding research was initiated. Studies in the use of enzymes in genetic research in Douglas-fir are showing promise.

Nursery research focused on improving the monitoring of quality control. Controlled environment chambers were developed for monitoring lodgepole pine. Combinations of hormones and fertilizers have been tested with encouraging results at Koksilah and Red Rock. Studies have shown that freeze-dried Douglas-fir pollen is still usable after two years.

Dr. N. Keser's book, *Interpretation of Landforms from Aerial Photographs,* has been well received both locally and outside of Canada. Permission to use his excellent stereo-pairs has been granted for a book under preparation at Oregon State University.

Monitoring excessive mortality in plantations in the Kamloops Forest District continued. Site-preparation studies in lodgepole pine cut overs to promote natural regeneration were conducted. Alternate foods were tested to reduce deer mice feeding on seeds sown by man.

## FOREST PROTECTION PROGRAM

Site preparation using fire was continued on those sites where it is known to be beneficial to the specific sites. Field staff assisted in joint projects with the Range Branch and the Fish and Wildlife Branch.

New infra-red detecting devices were used successfully to detect many fires which would not normally have been detected before they become dangerous.

The Zenith telephone number public reporting system proved of considerable value with a large number of useful reports being received.

In one forest district, initial attack times were reduced significantly as a result of changes in normal initial attack crew organization. One large crew of 25 men with helicopter transport was located at a central location and small auxiliary crews were maintained at each ranger district.

Although the western spruce budworm received the greatest publicity, no action was taken on this insect except the monitoring of nontarget organisms in the infested area. An internal report on the impact of the western spruce budworm, including recommendations, was completed by the end of the year.

Large-scale harvesting of mountain pine beetle infested timber continued. Other treatments used fire to control small infestations.

Tests in the use of fire to control dwarf mistletoe were carried out in the Cariboo Forest District.

## FIRE SUPPRESSION PROGRAM

The 1977 fire season was characterised by three- to four-week drought periods interspersed with short periods of rainy, cool weather.

Throughout the drought periods, less than usual lightning occurred with only 30 per cent of the fires resulting from lightning (10-year average, 36 per cent). Also, there were no extreme winds during these periods.

The use of seven new infra-red detectors was credited with the location of 150 invisible latent fires in burnt logging landings and current fires.

The total of 1,854 fires compared favourably with the 10-year average of 2,500. They burned a total of 3 796 hectares and had an average size of just over 2 hectares.

Direct suppression expenditure by the Forest Service was $3.4 million. Industry and other agencies spent another $1.2 million. A further $5.5 million was spent by the Forest Service on indirect costs such as maintaining fire-suppression activities of air tankers, purchase of equipment, site rehabilitation and overhead.

## INVENTORY PROGRAM

The new Research and Development Section was active in initiating a three-year conversion of the present forest inventory to a multiple-use inventory. The acquisition of a computerized mapping system has made the new integrated inventory system possible.

Reinventory surveys were completed on the Arrowhead, Edgewood, Kamloops, Kettle, Nakusp, Slocan, and Yalakom PSYU's. Environmental protection work was done on 23 units—Monkman, Stuart Lake, Finlay, Takla, Longworth, Queen Charlotte Islands, Morice, Kingcome, Quadra, Vancouver, Lac la Hache, Barton Hill, Nicola, Spallumcheen, Ashnola, Botanie, Similkameen, Kinbasket, Upper Kootenay, Lardeau and Granby PSYU's, and the Fort St. James and Furry Creek Special Sale Areas (SSA's). In all cases, field measurements were made in metric measure.

The Natural Stands Subsection established 133 new permanent growth plots in selectively logged Interior dry-belt fir stands and remeasured 87 ten-year-old growth plots in the Barrière, Nakusp, Raft, Shuswap, and Spallumcheen PSYU's. Remeasurements were made on 30 licensee established permanent growth plots in TFL 8 and three experimental plots on Vancouver Island. The section also began the compilation of computer produced metric yield equations and curves for the new forest inventory zones. The Managed Stands Subsection stem-mapped 768 plots and remeasured 314 plots on the Lower Coast and is now developing Preliminary Managed Stand Yield Tables.

The Volume and Decay Section sampled balsam and lodgepole pine stands in the Babine, Smithers, Cranbrook, and Fernie PSYU's. In addition, fir and larch stands were sampled in the Fernie PSYU.

The low-level fixed-base air photography program aided the work of the Managed Stands Section (spring and fall photos), obtained Level 4 photography in the Yalakom River, Nahatlatch River, Mehatle Creek, Pemberton Creek, and Boise Creek subunits and photographed the Carnation Creek Project for Environment Canada.

The Draughting, Compilation, and Publishing Sections processed most of the 590 forest cover maps and statements and unit reports for the areas surveyed in 1976.

## RANGE MANAGEMENT PROGRAM

In keeping with the Government's decision to make one agency responsible for the Crown forage resource, the Ministry of the Environment commenced referral of all grazing lease renewals to the Range Branch.

Four ARDA (*Agricultural and Rural Development Act*) two-year projects totalling $3,510,000 were launched for construction of a variety of structures and for resource treatments. Range Branch staff has a prime role in planning, although the implementation is done by contractors or ARDA employees. Monitoring the results of these programs will be a priority function of the Forest Service.

Range staff in the Cariboo Forest District hosted the Northwest Section of the Society for Range Management for a successful two-day field tour in July.

Fall sale prices for beef picked up and the turn around was attributed to the general deficit in the North American cow herd. The improvement was amplified by the discount of the Canadian dollar. The price gain over 1976 is $8 per 100 pounds live-weight.

The shortage of snow during the winter of 1976/77 severely reduced the availability of water for stock and irrigation in some areas. Fall rains and early snow in 1977 have restored water reserves. Range forage production was much below normal in both the Kamloops and Nelson Forest Districts. Abundant summer rain in the northern districts provided excellent range forage growth, but hampered hay production.

Brucellosis outbreaks at several unrelated points required emergency testing and herd disposal with compensation by authorities of the Federal Health of Animals Department. The range position of affected ranchers was protected.

## FOREST DEVELOPMENT ROADS PROGRAM

New construction extended the Michelle Forest Road in the Cariboo Forest District. Sections of the following forest roads were relocated and upgraded:

Morice River, Prince Rupert District.
Port Douglas–Pemberton and Harrison-East, Vancouver District.
Coldwater–Coquihalla, Kamloops District.
Red Fish, Nelson District.

Permanent bridges were constructed on the Lillooet River and on the Seymour River Forest Road.

With assistance in funding from the Ministry of Highways and Public Works, relocation and upgrading were carried out on the Head Bay Forest Road, the Germansen Landing Forest Road, and the Cayoosh–Joffre Forest Road.

Location survey assistance was provided to the Cariboo and Prince Rupert Forest Districts. Site surveys were completed on six sites in the Vancouver District. The Road Recorder Unit was employed in all six forest districts, completing 1,016 miles of traverse. Assistance was also given to the Cariboo, Prince Rupert, and Prince George Districts in evaluation of licensee constructed roads and bridges.

Consultants were engaged to gather data, design and prepare drawings and cost estimates for a bridge at Walker Creek Forest Road, across the Fraser River.

In co-operation with the Council of Forest Industries, assembly of land and equipment for a debris catchment and disposal area on the Fraser River has been initiated. The operation is planned to be functional by April 1978.

## RESERVOIR WATERWAY IMPROVEMENT PROGRAM

Disposal of debris was continued on the Peace, Duncan, and Stave reservoirs. Debris disposal on the Mica Reservoir is now being done by B.C. Hydro. Operations commenced on the Revelstoke 1880 Project under supervision of the Nelson Forest District.

# APPENDIX

## TABULATED DETAILED STATISTICS TO SUPPLEMENT THE ANNUAL REPORT OF THE FOREST SERVICE 1977

# CONTENTS

TABLE PAGE

1—Summary of Planting 1968–77 ..... 23

2—Planting by Forest District, 1977 ..... 24

3—Hectares Clearcut and Hectares Planted in Public Sustained-yield Units by Forest District, 1973–77 ..... 24

4—Site Preparation, 1977, Forest Service and Licensees in PSYU's ..... 25

5—Stand Improvement and Tending, 1977 (Hectares Completed), Forest Service and Licensee in Public Sustained-yield Units ..... 25

6—Regeneration Surveys, 1977, Forest Service and Licensees in PSYU's ..... 26

7—Cone Collections, 1977, Forest Service ..... 26

8—Seed Orchards Established as of 1977 ..... 27

9—Inventory of Seed in Storage, 1977, by Forest District ..... 27

10—Seed Extracted, 1977, Forest Service and Companies by Forest District ..... 28

11—Summary of Basic Data for Certified Tree-farms ..... 28

12—Summary of Basic Data for Farm Wood-lot Licences, 1977 ..... 29

13—Summary of Basic Data for Tree-farm Licences, 1977 ..... 30

14—Average Stumpage Prices Received by Species and Forest Districts on Timber Scaled From Tree-farm Licence Cutting Permits During 1977 ..... 32

15—Summary of Basic Data for Public Sustained-yield Units, 1977 ..... 33

16—Average Bid Stumpage Prices by Species and Forest Districts on Cutting Permits of Timber Sale Harvesting Licences and Timber Sales Issued During 1977 per Cunit Log Scale ..... 36

17—Timber Cut and Billed From Timber Sales and Timber Sale Harvesting Licences, 1977 ..... 37

18—Total Amount of Timber Scale Billed in British Columbia During the Years 1976 and 1977 ..... 38

19—Total Scale of All Products Billed in 1977 ..... 39

20—Species Cut, All Products, 1977 ..... 40

21—Acreage Logged, 1977 ..... 40

22—Total Scale of Christmas Trees Billed 1970–77 ..... 41

23—Wood-processing Plants of the Province ..... 42

24—Export of Logs, 1977 ..... 43

25—Exports From the Province of Other Forest Products, 1977 ..... 44

26—Unit Standard Reinventory Surveys, 1977 Field Work ..... 45

27—Production of Final Forest Cover Maps for 1976 Projects ..... 45

TABLE PAGE

28—Uses of Crown Range, 1977 ..... 46

29—Fire Occurrences by Months, 1977 ..... 47

30—Number and Causes of Forest Fires, 1977 ..... 47

31—Number and Causes of Forest Fires for the Last 10 Years ..... 47

32—Fires Classified by Size and Timber Loss, 1977 ..... 48

33—Loss of Property Other Than Forests, 1977 ..... 49

34—Damage to Forest Cover Caused by Forest Fires, 1977 (Part I) ..... 49

35—Damage to Forest Cover Caused by Forest Fires, 1977 (Part II) ..... 50

36—Fire Causes, Area Burned, Forest Service Cost, and Total Damage, 1977 ..... 51

37—Comparison of Loss Caused by Forest Fires in Last 10 Years ..... 52

38—Fires Classified by Forest District, Place of Origin, and Cost per Fire of Fire-fighting, 1977 ..... 53

39—Forest Revenue, Fiscal Year 1976/77 ..... 54

40—Forest Revenue, 1973–77 ..... 54

41—Amounts Charged Against Logging Operations, Fiscal Year 1976/77 ..... 55

42—Amounts Charged Against Logging Operations, 1977 ..... 56

43—Forest Service Expenditures, Fiscal Year 1976/77 ..... 57

44—Scaling Fund ..... 57

45—Accelerated Reforestation Fund ..... 57

*Table 1—Summary of Planting, 1968–77*

| Year | Forest Service on Crown Land | | Forest Service on Crown-granted Land (Forest Act, Sec. 152) | | Companies on Tree-farm Licences | | Companies on Timber Sale Harvesting Licences | | Other Private | | Totals | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Trees in Thousands | Hectares | Trees in Thousands | Hectares | Trees in Thousands | Hectares | Trees in Thousands | Hectares | Trees in Thousands | Hectares | Trees in Thousands | Hectares |
| *Coast* | | | | | | | | | | | | |
| 1977 | 7,174.8 | 6 467 | ..... | ..... | 13,159.0 | 15 646 | 3,082.0 | 2 605 | 4,772.7 | 5 122 | 28,188.5 | 29 840 |
| 1976 | 6,549.3 | 5 973 | ..... | ..... | 11,779.7 | 13 496 | 2,937.8 | 2 610 | 7,190.2 | 5 620 | 28,457.0 | 27 699 |
| 1975 | 8,725.9 | 7 243 | ..... | ..... | 9,522.9 | 10 357 | 1,768.2 | 1 527 | 4,123.5 | 4 142 | 24,140.5 | 23 269 |
| 1974 | 8,352.1 | 8 147 | ..... | ..... | 11,921.3 | 12 805 | 1,374.2 | 1 223 | 3,501.4 | 3 604 | 25,149.0 | 25 779 |
| 1973 | 13,855.7 | 12 614 | ..... | ..... | 12,769.1 | 13 757 | 1,550.3 | 1 393 | 4,046.0 | 4 053 | 32,221.1 | 31 817 |
| 1972 | 12,998.8 | 12 326 | ..... | ..... | 12,176.0 | 13 760 | 187.6 | 153 | 4,872.6 | 4 515 | 30,235.0 | 30 754 |
| 1971 | 9,627.0 | 9 185 | 55.0 | 52 | 11,603.8 | 12 843 | 82.4 | 96 | 4,756.0 | 4 601 | 26,124.2 | 26 777 |
| 1970 | 7,202.0 | 7 171 | 118.0 | 109 | 10,616.5 | 12 348 | ..... | ..... | 7,914.6 | 8 120 | 25,851.1 | 27 748 |
| 1969 | 4,791.0 | 4 596 | 107.0 | 81 | 9,981.6 | 11 601 | ..... | ..... | 5,673.6 | 6 048 | 20,553.2 | 22 326 |
| 1968 | 3,731.9 | 3 456 | 82.0 | 85 | 8,797.3 | 10 173 | ..... | ..... | 5,470.1 | 6 753 | 18,081.3 | 20 467 |
| Previous planted | 105,359.0 | 59 662 | 15,106.9 | 10 927 | 80,769.1 | 84 714 | ..... | ..... | 24,736.3 | 27 739 | 225,971.3 | 183 042 |
| Totals to date | 188,367.5 | 136 840 | 15,468.9 | 11 254 | 193,096.3 | 211 500 | 10,982.5 | 9 607 | 77,057.0 | 80 317 | 484,972.2 | 449 518 |
| *Interior* | | | | | | | | | | | | |
| 1977 | 17,503.4 | 13 995 | ..... | ..... | 3,697.9 | 3 012 | 16,156.9 | 13 107 | 285.0 | 209 | 37,643.2 | 30 323 |
| 1976 | 23,801.9 | 18 602 | ..... | ..... | 3,526.0 | 2 947 | 16,469.9 | 13 242 | 566.4 | 502 | 44,364.2 | 35 293 |
| 1975 | 24,712.8 | 21 054 | 21.0 | 16 | 3,129.7 | 2 751 | 12,588.8 | 10 050 | 355.0 | 344 | 40,807.3 | 34 215 |
| 1974 | 16,128.2 | 12 938 | ..... | ..... | 3,076.8 | 3 199 | 9,380.3 | 7 535 | 82.8 | 36 | 28,668.1 | 23 708 |
| 1973 | 14,371.1 | 10 954 | ..... | ..... | 3,551.1 | 3 034 | 5,521.1 | 4 284 | 541.6 | 362 | 23,984.9 | 18 634 |
| 1972 | 14,256.0 | 10 765 | ..... | ..... | 1,692.0 | 1 506 | 2,066.0 | 1 674 | 145.0 | 138 | 18,159.0 | 14 083 |
| 1971 | 15,449.2 | 12 565 | ..... | ..... | 1,461.0 | 1 340 | 743.0 | 606 | 69.0 | 67 | 17,722.2 | 14 578 |
| 1970 | 7,201.0 | 5 938 | ..... | ..... | 753.0 | 847 | 40.0 | 27 | 166.0 | 149 | 8,160.0 | 6 961 |
| 1969 | 5,019.9 | 4 519 | ..... | ..... | 301.7 | 369 | ..... | ..... | 70.7 | 51 | 5,392.3 | 4 939 |
| 1968 | 2,512.3 | 2 369 | ..... | ..... | 360.0 | 373 | ..... | ..... | 129.3 | 90 | 3,001.6 | 2 832 |
| Previous planted | 11,672.5 | 10 252 | ..... | ..... | 3,679.6 | 4 468 | ..... | ..... | 641.8 | 555 | 15,993.9 | 15 275 |
| Totals to date | 152,628.3 | 123 951 | 21.0 | 16 | 25,228.8 | 23 846 | 62,966.0 | 50 525 | 3,052.6 | 2 503 | 243,896.7 | 200 841 |
| All planted to date | 340,995.8 | 260 791 | 15,489.9 | 11 270 | 218,325.1 | 235 346 | 73,948.5 | 60 132 | 80,109.6 | 82 820 | 728,868.9 | 650 359 |
| All planted this year | 24,678.2 | 20 462 | ..... | ..... | 16,856.9 | 18 658 | 19,238.9 | 15 712 | 5,057.7 | 5 331 | 65,831.7 | 60 163 |

*Table 2—Planting by Forest District, 1977*

(Number of Trees in Thousands (Hectares in Parentheses Below))

| Forest District | Forest Service on Crown Land and Crown-granted Land | Companies on TSHL's, TSL's on Crown Land | Companies on Tree-farm Licences | | | Tree-farm | Companies on Other Private | District Totals |
|---|---|---|---|---|---|---|---|---|
| | | | Crown Land | Crown-granted Land | Total | | | |
| Vancouver | 6,072.8 | 2,704.0 | 9,400.8 | 2,439.2 | 11,840.0 | 1,392.1 | 3,380.6 | 25,389.5 |
| | (5 510.9) | (2 242.5) | (11 577.2) | (2 715.4) | (14 292.6) | (1 623.3) | (3 498.8) | (27 168.1) |
| Prince Rupert | 2,446.7 | 1,356.0 | 1,310.4 | 8.6 | 1,319.0 | ..... | ..... | 5,121.7 |
| | (2 173.6) | (1 108.0) | (1 342.0) | (11.0) | (1 353.0) | ..... | ..... | (4 634.6) |
| Prince George | 8,359.3 | 7,608.5 | 929.2 | ..... | 929.2 | ..... | ..... | 16,897.0 |
| | (6 650.2) | (6 150.4) | (744.7) | ..... | (744.7) | ..... | ..... | (13 545.3) |
| Kamloops | 1,553.5 | 3,247.8 | 1,486.7 | ..... | 1,486.7 | ..... | ..... | 6,288.0 |
| | (1 120.2) | (2 662.1) | (1 228.0) | ..... | (1 228.0) | ..... | ..... | (5 010.3) |
| Nelson | 2,521.7 | 1,232.0 | 1,178.0 | ..... | 1,178.0 | 249.0 | 36.0 | 5,216.7 |
| | (1 986.6) | (956.0) | (950.0) | ..... | (950.0) | (171.0) | (38.0) | (4 101.6) |
| Cariboo | 3,724.2 | 3,090.6 | 104.0 | ..... | 104.0 | ..... | ..... | 6,918.8 |
| | (3 020.0) | (2 592.7) | (89.0) | ..... | (89.0) | ..... | ..... | (5 701.7) |
| Totals | 24,678.2 | 19,238.9 | 14,409.1 | 2,447.8 | 16,856.9 | 1,641.1 | 3,416.6 | 65,831.7 |
| | (20 461.5) | (15 711.7) | (15 930.9) | (2 726.4) | (18 657.3) | (1 794.3) | (3 536.8) | (60 161.6) |

*Table 3—Hectares Clearcut and Hectares Planted in Public Sustained-yield Units by Forest District, 1973–77*

(Hectares Planted Includes Forest Service and Licensee Planting in PSYU's)

| District | 1973 | 1974 | 1975 | 1976 | 1977 | Total Five-year Period | Accumulative Total, 1971 + | Per Cent Cutover Planted, 1971 + |
|---|---|---|---|---|---|---|---|---|
| Vancouver— | | | | | | | | |
| Hectares clearcut | 15 446 | 10 231 | 8 636 | 12 414 | 12 977 | 59 704 | 82 905 | |
| Hectares planted | 11 414 | 8 650 | 7 843 | 6 581 | 7 753 | 42 241 | 62 107 | 74.9 |
| Prince Rupert— | | | | | | | | |
| Hectares clearcut | 12 470 | 11 901 | 7 018 | 11 293 | 12 462 | 55 144 | 71 948 | |
| Hectares planted | 6 965 | 3 291 | 4 689 | 6 253 | 3 282 | 24 480 | 32 105 | 44.6 |
| Prince George— | | | | | | | | |
| Hectares clearcut | 31 609 | 33 282 | 26 855 | 30 267 | 40 791 | 162 804 | 222 305 | |
| Hectares planted | 3 348 | 5 779 | 8 955 | 12 116 | 13 545 | 43 743 | 48 316 | 21.7 |
| Cariboo— | | | | | | | | |
| Hectares clearcut | 13 235 | 12 392 | 11 869 | 14 570 | 15 529 | 67 595 | 91 597 | |
| Hectares planted | 2 633 | 4 670 | 7 457 | 5 382 | 5 612 | 25 754 | 29 815 | 32.6 |
| Kamloops— | | | | | | | | |
| Hectares clearcut | 17 027 | 10 907 | 10 539 | 17 968 | 16 770 | 73 211 | 99 301 | |
| Hectares planted | 1 471 | 2 961 | 4 569 | 4 840 | 3 782 | 17 623 | 22 373 | 22.5 |
| Nelson— | | | | | | | | |
| Hectares clearcut | 13 073 | 12 430 | 8 060 | 14 233 | 12 124 | 59 920 | 84 779 | |
| Hectares planted | 3 847 | 4 272 | 6 386 | 5 276 | 2 942 | 22 723 | 29 014 | 34.2 |
| Totals— | | | | | | | | |
| Hectares clearcut | 102 860 | 91 143 | 72 977 | 100 745 | 110 653 | 478 378 | 652 835 | |
| Hectares planted | 29 678 | 29 623 | 39 899 | 40 448 | 36 916 | 176 564 | 223 730 | 34.3 |

*Table 4—Site Preparation, 1977, Forest Service and Licensees in PSYU's*

| Method of Treatment | Prime Objective Indicated in Appropriate Column | | | | |
|---|---|---|---|---|---|
| | Hectares | | | | |
| | (1) Natural Regeneration Preparation | (2) Planting Preparation | (3) Hazard Abatement | (4) Total | (5) Per Cent |
| 1. Broadcast burned | 1 183 | 10 494 | 11 908 | 23 585 | 14.7 |
| 2. Bunched and burned | 3 502 | 2 456 | 5 346 | 11 304 | 7.1 |
| 3. Spot burned | 1 671 | 2 524 | 22 675 | 26 870 | 16.8 |
| 4. Landings only burned | 1 568 | 3 673 | 66 476 | 71 717 | 44.9 |
| 5. Chemical treatment and burn | ..... | ..... | ..... | ..... | ..... |
| 6. Drag scarified | 10 713 | 617 | ..... | 11 330 | 7.1 |
| 7. Blade scarified | 1 256 | 878 | 1 225 | 3 359 | 2.1 |
| 8. Bunched only | 131 | 212 | 458 | 801 | 0.5 |
| 9. Chemical treatment only | 12 | ..... | ..... | 12 | ..... |
| 10. Residual falling only (including snags) | 539 | 1 552 | 1 300 | 3 391 | 2.1 |
| 11. Snag falling only | ..... | ..... | 613 | 613 | 0.4 |
| 12. Other treatment | 761 | 293 | 940 | 1 994 | 1.2 |
| 13. No treatment | 2 075 | 2 036 | 800 | 4 911 | 3.1 |
| Totals | 23 411 | 24 735 | 111 741 | 159 887 | 100.0 |

*Table 5—Stand Improvement and Tending, 1977 (Hectares Completed), Forest Service and Licensee in Public-sustained Yield Units*

| Forest District | Conifer Release (Brushing) | | Stocking Control | | | | Mistletoe Control | | Total | |
|---|---|---|---|---|---|---|---|---|---|---|
| | | | Juvenile Spacing | | Commercial Thinning | | | | | |
| | Forest Service | Licensee | Forest Service | Licensee | Forest Service | Licensee | Forest Service | Licensee | Forest Service | Licensee |
| Vancouver | 154 | 2 673 | 1 078 | 5 100 | ..... | 95 | ..... | ..... | 1 232 | 7 868 |
| Prince Rupert | ..... | ..... | 62 | 81 | ..... | ..... | ..... | ..... | 62 | 81 |
| Prince George | ..... | ..... | ..... | ..... | ..... | ..... | 142 | ..... | 142 | ..... |
| Cariboo | ..... | ..... | 45 | ..... | ..... | ..... | 858 | 1 607 | 903 | 1 607 |
| Nelson | ..... | ..... | 107 | ..... | ..... | ..... | ..... | ..... | 107 | ..... |
| Kamloops | ..... | ..... | 338 | ..... | ..... | ..... | ..... | 60 | 338 | 60 |
| Totals | 154 | 2 673 | 1 630 | 5 181 | ..... | 95 | 1 000 | 1 667 | 2 784 | 9 616 |
| Grand totals | 2 827 | | 6 811 | | 95 | | 2 667 | | 12 400 | |

*Table 6—Regeneration Surveys, 1977, Forest Service and Licensees in PSYU's*

| Forest District | Total Hectares Examined | Hectares Satisfactorily Stocked | Hectares Not Satisfactorily Stocked | Per Cent Stocked |
|---|---|---|---|---|
| Vancouver— | | | | |
| Forest Service | 25 727 | 19 234 | 6 493 | 74.8 |
| Licensee | (1) | (1) | (1) | (1) |
| Total | 25 727 | 19 234 | 6 493 | |
| Prince Rupert— | | | | |
| Forest Service | 8 074 | 6 284 | 1 790 | 77.8 |
| Licensee | 2 667 | 932 | 1 735 | 34.9 |
| Total | 10 741 | 7 216 | 3 525 | 67.2 |
| Prince George— | | | | |
| Forest Service | 29 610 | 24 345 | 5 265 | 82.2 |
| Licensee | 5 980 | 2 721 | 3 260 | 45.5 |
| Total | 35 590 | 27 066 | 8 525 | 76.0 |
| Cariboo— | | | | |
| Forest Service | 36 928 | 30 975 | 5 952 | 83.9 |
| Licensee | 7 835 | 4 889 | 2 946 | 62.4 |
| Total | 44 763 | 35 864 | 8 898 | 80.1 |
| Kamloops— | | | | |
| Forest Service | 23 703 | 17 847 | 5 856 | 75.3 |
| Licensee | 15 224 | 9 494 | 5 730 | 62.4 |
| Total | 38 927 | 27 341 | 11 586 | 70.2 |
| Nelson— | | | | |
| Forest Service | 7 084 | 4 219 | 2 865 | 59.6 |
| Licensee | 9 269 | 4 201 | 5 068 | 45.3 |
| Total | 16 353 | 8 420 | 7 933 | 51.5 |
| Provincial totals— | | | | |
| Forest Service | 131 126 | 102 904 | 28 221 | 78.5 |
| Licensee | 40 975 | 22 237 | 18 739 | 54.3 |
| Total | 172 101 | 125 141 | 46 960 | 72.7 |

1 Vancouver data incomplete (no licensee report).

*Table 7—Cone Collections, 1977 (Hectolitres), Forest Service*

(1976 in Parentheses)

| Species | Vancouver | Prince Rupert | Prince George | Cariboo | Kamloops | Nelson | Total |
|---|---|---|---|---|---|---|---|
| Douglas-fir | (312) | ---- | ------ | (1 009) | (17) | ------ | (1 338) |
| Western hemlock | (45) | ---- | ------ | ------ | ------ | (3) | (48) |
| Mountain hemlock | (2) | ---- | ------ | ------ | ------ | ------ | (2) |
| Amabilis fir | (33) | ---- | ------ | ------ | ------ | ------ | (33) |
| Grand fir | (85) | ---- | ------ | ------ | ------ | (2) | (87) |
| Alpine fir | (8) | ---- | ------ | ------ | ------ | ------ | (8) |
| Sitka spruce | (1) | ---- | ------ | ------ | ------ | ------ | (1) |
| Interior spruce | (73) | (2) | (15) | ------ | (451) | (130) | (671) |
| Red cedar | (2) | ---- | ------ | ------ | ------ | (3) | (5) |
| Lodgepole pine | (1) | 42.0 | ------ | 28.8 | 72.31 | 86.0 | 229.1 |
| | | | | (75) | (190) | (5) | (271) |
| Ponderosa pine | (5) | ---- | ------ | ------ | (233) | ------ | (238) |
| White pine | 8.0 | ---- | ------ | ------ | ------ | 3.0 | 11 |
| | | | | ------ | ------ | (2) | (2) |
| Limber pine | ------ | ---- | ------ | ------ | ------ | (6) | (6) |
| Larch | ------ | ---- | ------ | ------ | (24) | (21) | (45) |
| Birch | ------ | ---- | ------ | ------ | ------ | (0.3) | (0.3) |
| Total 1977 | 8 | 42 | ------ | 28.8 | 72.3 | 89 | 240.1 |
| Total 1976[2] | (567) | (2) | (15) | (1 084) | (915) | (172.3) | (2 755.3) |

1 Licensees in Prince Rupert and Kamloops collected a further 68.0 hectolitres.
2 Collections in 1976 were considered poor.

*Table 8—Seed Orchards Established as of 1977*

| Orchard No. and Agency | Date(s) Established | Location | Species[1] | Elevation Band (m) | Type | Size (ha) |
|---|---|---|---|---|---|---|
| 1. B.C. Forest Service | 1963 | Campbell River | F | 450–610 | Clonal + seedlings | 6.6 |
| 2. Tahsis A | 1962–69 | Gold River | F | 0–450 | Clonal | 2.2 |
| 3. B.C. Forest Products | 1963–64 | Caycuse | F | 400–660 | Clonal | 1.8 |
| 4. Crown Zellerbach | 1964–65 | Courtenay | F | 0–450 | Clonal | 1.8 |
| 5. Crown Zellerbach | 1964–65 | Nanaimo Lakes | F | 450+ | Clonal | 1.8 |
| 6. Rayonier | 1964–65 | Jordan River | F | 450 | Clonal | 4.1 |
| 7. Tahsis B | 1964–68 | Gold River | F | 450+ | Clonal | 1.8 |
| 8. Tahsis Local | 1968–75 | Gold River | F | 0–910 | Clonal | 2.3 |
| 9. Pacific Logging | 1966 | Saanich | F | 0–450 | Clonal + seedlings | 1.8 |
| 10. Pacific Logging | 1966 | Saanich | F | 550 | Clonal + seedlings | 3.4 |
| 11. Tahsis C | 1968–75 | Saanich | F | 0–450 | Clonal + seedlings | 4.9 |
| 12. Rayonier | 1968 | Jordan River | F | | Seedlings | 0.4 |
| 13. Rayonier | 1969 | Port McNeill | F | | Seedlings | 0.4 |
| 14. B.C. Forest Service | 1970 | Duncan | F | 450–640 | Seedlings | 4.5 |
| 15. B.C. Forest Service | 1971 | Campbell River | F | 0–300 | Seedlings | 4.9 |
| 16. Canadian Forest Products | 1971 | Sechelt | F | 450–610 | Clonal | 8.2 |
| 17. Tahsis | 1969–75 | Gold River | Hw | 0–910 | Clonal + seedlings | 3.7 |
| 18. Tahsis | 1973 | Saanich | Ss | 0–450 | Clonal | 0.8 |
| 19. B.C. Forest Service | 1974 | Red Rock | Pl | | Clonal | 4.1 |
| 20. B.C. Forest Service | 1975 | Saanich | F | 760–1 070 | Seedlings | 7.4 |
| 21. Pacific Logging | 1976 | Saanich | F | 550 | Seedlings | 6.0 |
| | | | | | Total | 72.9 |

[1] F—Coastal Douglas-fir. Hw—Coastal western hemlock. Ss—Coastal Sitka spruce. Pl—Interior lodgepole pine.

*Table 9—Inventory of Seed in Storage, 1977, by Forest District (Quantity in Grams (g)[1])*

| Species | Vancouver | Prince Rupert | Prince George | Cariboo | Kamloops | Nelson | Total |
|---|---|---|---|---|---|---|---|
| Douglas-fir | 5 933 849 | 113 269 | 122 725 | 964 430 | 1 212 570 | 2 037 018 | 10 383 861 |
| Western hemlock | 214 041 | 35 955 | ..... | ..... | 5 208 | 7 235 | 262 439 |
| Englemann spruce | 28 855 | 1 505 279 | 1 990 194 | 411 464 | 533 283 | 1 402 176 | 5 671 251 |
| Sitka spruce | 219 775 | 469 649 | ..... | ..... | ..... | ..... | 689 424 |
| Lodgepole pine | 2 415 | 619 177 | 708 130 | 225 399 | 878 062 | 1 133 158 | 3 566 341 |
| Mountain hemlock | 18 554 | ..... | ..... | ..... | ..... | ..... | 18 554 |
| Yellow cedar | 6 003 | ..... | ..... | ..... | ..... | ..... | 6 003 |
| Balsam | 510 160 | ..... | 6 440 | 6 860 | 159 100 | 2 538 | 685 108 |
| Red cedar | 55 841 | 21 900 | ..... | ..... | 59 614 | 7 810 | 145 165 |
| Miscellaneous | 3 145 | ..... | 543 | ..... | 542 122 | 177 643 | 723 453 |
| Totals | 6 992 648 | 2 565 229 | 2 828 032 | 1 608 153 | 3 389 959 | 4 767 578 | 22 151 599 |

[1] Including seed provided by companies:

| | |
|---|---|
| Total seed native species | 22 151 599 |
| Total seed exotic species | 82 297 |
| Total seed in storage | 22 233 896 |

*Table 10—Seed Extracted, 1977 (Grams),[1] Forest Service and Companies by Forest District*

| Species | Vancouver | Prince Rupert | Prince George | Cariboo | Kamloops | Nelson | Total |
|---|---|---|---|---|---|---|---|
| Douglas-fir | 9 913 | ..... | ..... | 23 015 | ..... | ..... | 32 928 |
| Western hemlock | 2 140 | ..... | ..... | ..... | ..... | ..... | 2 140 |
| Mountain hemlock | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Englemann spruce | ..... | ..... | ..... | ..... | 12 950 | ..... | 12 950 |
| Sitka spruce | 85 | ..... | ..... | ..... | ..... | ..... | 85 |
| Lodgepole pine | 3 240 | ..... | ..... | 24 625 | 127 975 | 1 770 | 157 610 |
| Yellow cedar | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Balsam | 3 270 | ..... | ..... | ..... | ..... | ..... | 3 270 |
| Red Cedar | ..... | ..... | ..... | ..... | ..... | ..... | ..... |
| Miscellaneous | 194 | ..... | ..... | ..... | ..... | 1 640 | 1 834 |
| Totals | 18 842 | ..... | ..... | 47 640 | 140 925 | 3 140 | 210 817 |

[1] 1 343 000 grams of seed sown in 1977.

*Table 11—Summary of Basic Data for Certified Tree-farms (Private Sustained-yield Units Over Crown-granted Lands)*

INCLUDED WITHIN TREE-FARM LICENCES

| Forest District | Number of Tree-farms | Productive Area (Acres) | | | | Total Area (Acres) | Allowable Annual Cut Or Estimated Productive Capacity (Cunits) |
|---|---|---|---|---|---|---|---|
| | | Mature | Immature | NSR and NCC | Total | | |
| Vancouver | 14 | 58,874 | 239,617 | 30,249 | 328,740 | 363,204 | 328,892 |
| Prince George | 1 | 33 | 1,043 | 145 | 1,221 | 1,280 | 458 |
| Nelson | 2 | 494 | 4,719 | 4,394 | 9,607 | 10,158 | 4,312 |
| Totals | 17 | 59,401 | 245,379 | 34,788 | 339,568 | 374,642 | 333,662 |

NOT INCLUDED WITHIN TREE-FARM LICENCES

| | | | | | | | |
|---|---|---|---|---|---|---|---|
| Vancouver | 19 | 97,937 | 303,932 | 36,853 | 438,722 | 475,669 | 402,999 (1,000) |
| Nelson | 10 | 110,296 | 214,699 | 92,495 | 417,490 | 486,900 | 111,133 (293,700) |
| Totals | 29 | 208,233 | 518,631 | 129,348 | 856,212 | 962,569 | 514,132 (294,700) |
| Grand totals | 46 | 267,634 | 764,010 | 164,136 | 1,195,780 | 1,337,211 | 847,794 (294,700) |

Figures in parentheses ( ) are Christmas trees.

*Table 12—Summary of Basic Data for Farm Wood-lot Licences (Private Sustained-yield Units), 1977*

| Forest District | Number of Farm Wood-lot Licences | Productive Area (Acres) | | | Total Area (Acres) | Allowable Annual Cut (Cunits) |
|---|---|---|---|---|---|---|
| | | Crown | Private | Total | | |
| Vancouver | 10 | 1,433 | 158 | 1,591 | 2,072 | 706 |
| Prince Rupert | 4 | 1,274 | 147 | 1,421 | 2,436 | 284 |
| Prince George | 4 | 997 | ..... | 997 | 1,032 | 400 |
| Cariboo | 9 | 2,527 | 242 | 2,769 | 3,973 | 646 |
| Kamloops | 2 | 371 | 96 | 467 | 467 | 163 |
| Nelson | 4 | 1,359 | 617 | 1,976 | 2,071 | 267 |
| Grand totals | 33 | 7,961 | 1,260 | 9,221 | 12,051 | 2,466 |

*Table 13—Summary of Basic Data for Tree-farm Licences (Private Sustained-yield Units), 1977*

| TFL No. and Name | Five-year Working-plan Period | Licensee | Productive Area (Acres) | | | Total Area (Acres) | Allowable Annual Cut (Cunits) | Volume Scaled (Cunits) |
|---|---|---|---|---|---|---|---|---|
| | | | Schedule B | Schedule A | Total | | | |
| *Vancouver Forest District* | | | | | | | | |
| 2. Duncan Bay[1] | 1975–1979 | Crown Zellerbach Canada Ltd. | 260,644 | 144,288 | 404,932 | 473,193 | 203,640 | 172,562 |
| 6. Quatsino | 1976–Mar. 1979 | Rayonier Canada (B.C.) Limited | 295,170 | 60,365 | 355,535 | 420,134 | 417,000 | 439,314 |
| 7. Salmon River | 1977–Mar. 1979 | MacMillan Bloedel Limited | 117,514 | 58,012 | 175,526 | 194,602 | 185,000 | 215,713 |
| 10. Toba | 1975–Mar. 1979 | Timberland Development Co. Ltd. | 94,241 | 611 | 94,852 | 574,279 | 63,300 | 35,670 |
| 12. Hardwicke | 1974–78 (ext. Mar. 1979) | Crown Zellerbach (Hardwicke Island) Ltd. | 19,935 | 1,641 | 21,576 | 23,404 | 25,000 | 17,240 |
| 17. Knight Inlet | 1970–74 (ext. 1977) | British Columbia Forests Products Limited | 118,719 | 553 | 119,272 | 681,435 | 73,360 | 61,784 |
| 19. Tahsis | 1977–Mar. 1979 | Tahsis Company Ltd. | 260,068 | 19,108 | 279,176 | 473,420 | 304,500 | 337,501 |
| 20. Tofino | 1973–77 (ext. Mar. 1979) | MacMillan Bloedel Industries Ltd. | 214,849 | 141,243 | 356,092 | 426,371 | 383,120 | 332,771 |
| 21. Alberni | 1973–77 (ext. Mar. 1979) | MacMillan Bloedel Industries Ltd. | 273,206 | 260,693 | 533,899 | 638,050 | 683,420 | 495,137 |
| 22. Maquinna | 1972–76 | British Columbia Forest Products Limited | 316,179 | 58,122 | 374,301 | 413,687 | 363,044 | 365,677 |
| 25. Naka[1] | 1977–1979 | Rayonier Canada (B.C.) Limited | 158,624 | 66,509 | 225,133 | 361,308 | 184,358 | 179,350 |
| 26. Mission Municipal | 1974–78 (ext. Mar. 1979) | Corporation of the District of Mission | 13,260 | 2,934 | 16,194 | 18,957 | 11,400 | 12,611 |
| 27. Nitinat | 1970–74 (ext. 1977) | British Columbia Forest Products Limited | 29,363 | 2,708 | 32,071 | 35,870 | 40,639 | 25,063 |
| 36. Cordero | 1972–76 | British Columbia Forest Products Limited | 20,902 | 6,100 | 27,002 | 28,821 | 31,050 | 29,530 |
| 37. Nimpkish | 1976–80 | Canadian Forest Products Ltd. | 242,555 | 92,211 | 334,766 | 465,031 | 387,000 | 354,927 |
| 38. Squamish | 1973–77 | Empire Mills Limited | 129,266 | 470 | 129,736 | 541,175 | 93,000 | 101,802 |
| 39. Haida[1] | 1976–80 | MacMillan Bloedel Limited | 453,563 | 177,549 | 631,112 | 1,060,028 | 648,450[3] | 535,323 |
| Totals | 17 | | 3,018,058 | 1,093,117 | 4,111,175 | 6,829,765 | 4,097,281 | 3,711,975 |
| *Prince Rupert Forest District* | | | | | | | | |
| 1. Port Edward | 1970–74 (ext. 1978) | Canadian Cellulose Company Limited | 2,288,010 | 15,085 | 2,303,095 | 6,665,920 | 720,000 | 295,275 |
| 2. Duncan Bay[2] | 1975–1979 | Crown Zellerbach Canada Ltd. | 33,019 | 26,892 | 59,911 | 68,165 | 73,360 | 71,957 |
| 24. Moresby | 1974–78 (ext. Mar. 1979) | Rayonier Canada (B.C.) Limited | 184,781 | 7,332 | 192,113 | 277,909 | 154,000 | 154,061 |
| 25. Naka[2] | 1977–1979 | Rayonier Canada (B.C.) Limited | 125,441 | 38,365 | 163,806 | 761,687 | 33,142 | 4 |
| 39. Haida[2] | 1976–80 | MacMillan Bloedel Limited | 435,349 | 101,567 | 536,916 | 734,941 | 530,550[3] | 393,894 |
| 41. Kitimat | 1975–79 | Eurocan Pulp & Paper Company Limited | 602,219 | | 602,219 | 2,526,261 | 200,000 | 172,843 |
| Totals | 6 | | 3,668,819 | 189,241 | 3,858,060 | 11,034,883 | 1,711,052 | 1,088,034 |
| *Kamloops Forest District* | | | | | | | | |
| 9. Okanagan West | 1972–78 (ext. Mar. 1979) | Crown Zellerbach Canada Ltd. | 178,532 | 1,686 | 180,218 | 195,981 | 74,300 | 80,267 |
| 15. Inkaneep | 1974–78 (ext. Mar. 1979) | Northwood Properties Ltd. | 113,133 | 160 | 113,293 | 120,261 | 25,800 | 24,016 |
| 16. Monte Lake | 1974–78 (ext. Mar. 1979) | Crown Zellerbach Canada Ltd. | 120,172 | | 120,172 | 128,101 | 45,200 | 59,573 |
| 18. Clearwater | 1977–Mar. 1979 | Clearwater Timber Products Limited | 166,912 | | 166,912 | 183,404 | 74,000 | 76,889 |
| 32. Bolean | 1975–79 | Crown Zellerbach Canada Ltd. | 31,327 | | 31,327 | 33,494 | 12,000 | 11,138 |
| 33. Sicamous | 1975–79 | Federated Co-operatives Limited | 20,566 | | 20,566 | 21,032 | 10,055 | 12,163 |
| 35. Jamieson Creek | 1974–78 | Weyerhaeuser Canada Ltd. | 92,129 | | 92,129 | 97,650 | 31,950 | 19,835 |
| Totals | 7 | | 722,771 | 1,846 | 724,617 | 779,923 | 273,305 | 283,881 |

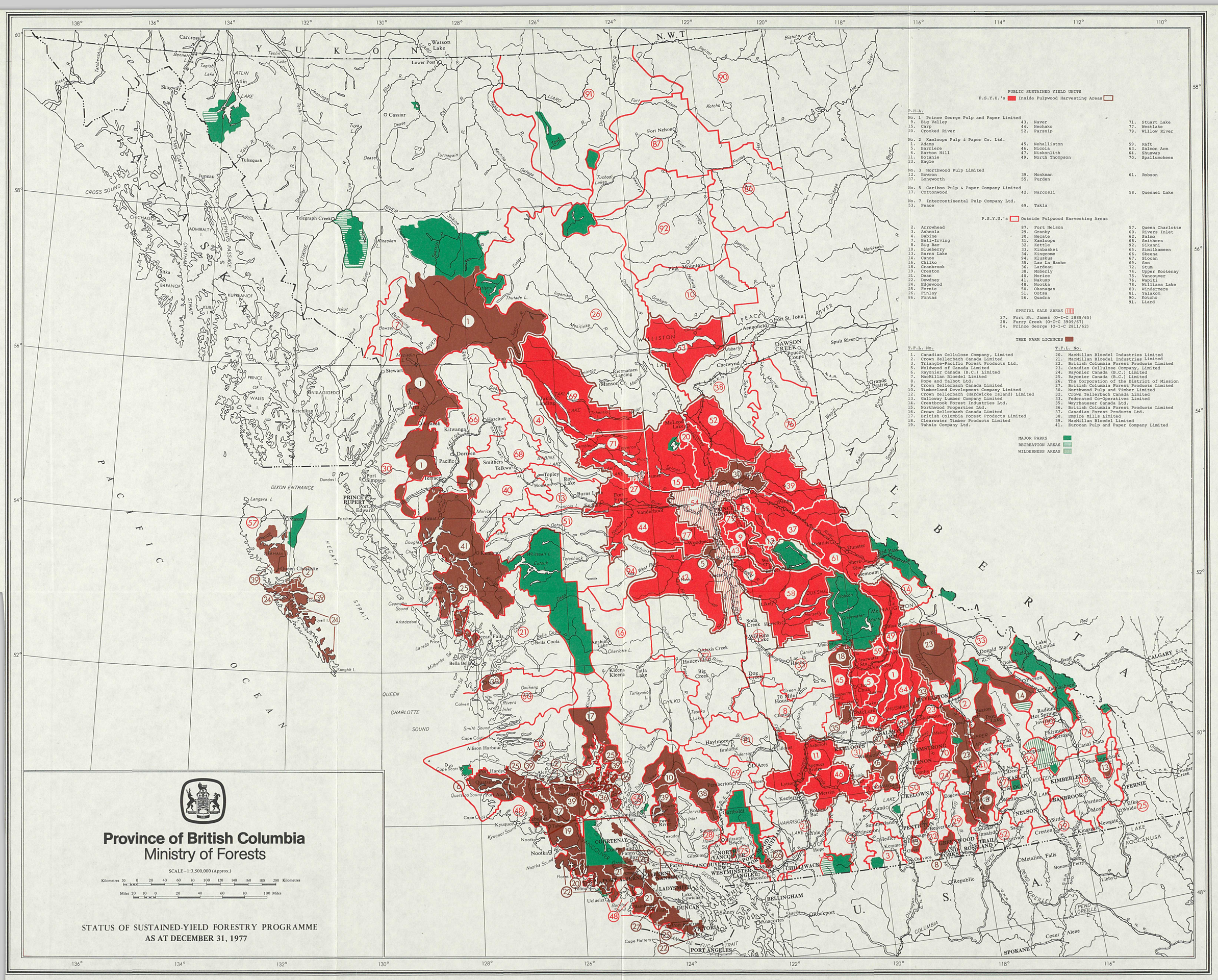
| | | | | | | | | |
|---|---|---|---|---|---|---|---|---|
| *Nelson Forest District* | | | | | | | | |
| 3. Little Slocan | 1973–77 | Triangle-Pacific Forest Products Ltd. | 109,925 | ..... | 109,925 | 196,951 | 44,600 | 59,291 |
| 8. Boundary Creek | 1974–78 (ext. Mar. 1979) | Pope & Talbot Ltd. | 179,569 | ..... | 179,569 | 192,136 | 53,250 | 83,930 |
| 13. Bull River | 1974–78 (ext. Nov. 1980) | Galloway Lumber Company Limited | 51,112 | 485 | 51,597 | 92,270 | 12,700 | 13,142 |
| 14. Spillimacheen | 1974–78 (ext. Mar. 1979) | Crestbrook Forest Industries Ltd. | 118,043 | 1,000 | 119,043 | 344,749 | 40,800 | 35,307 |
| 23. Arrow Lakes | 1972–76 (ext. 1979) | Canadian Cellulose Company Limited | 930,515 | 37,245 | 967,760 | 2,518,737 | 415,000 | 318,090 |
| Totals | 5 | | 1,389,164 | 38,730 | 1,427,894 | 3,344,843 | 566,350 | 509,760 |
| *Cariboo Forest District* | | | | | | | | |
| 5. Mackenzie-Cariboo | 1975–Mar. 1979 | Weldwood of Canada Limited | 81,196 | 695 | 81,891 | 85,047 | 47,600 | 32,197 |
| *Prince George Forest District* | | | | | | | | |
| 30. Northwood | 1976–June 2, 1980 | Northwood Pulp Limited | 390,929 | 1,725 | 392,654 | 447,946 | 155,720 | 161,491 |
| Grand totals | 34 | | 9,270,937 | 1,325,354 | 10,596,291 | 22,522,407 | 6,851,308 | 5,787,338 |

[1] Tree-farm licences partly within the Prince Rupert District.
[2] Tree-farm licences partly within the Vancouver District.
[3] Estimated.

*Table 14—Average Stumpage Prices Received by Species and Forest Districts on Timber Scaled From Tree-farm Licence Cutting Permits During 1977*

| Forest District | Douglas-fir | | | Cedar | | | Spruce | | | Hemlock | | | Balsam | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit |
| | | $ | $ | | $ | $ | | $ | $ | | $ | $ | | $ | $ |
| Vancouver | 211,551 | 10.19 | 1.90–31.70 | 543,836 | 21.32 | 2.00–41.30 | 27,537 | 24.11 | 2.00–89.40 | 957,371 | 5.39 | 1.40–15.10 | 483,443 | 5.50 | 1.70–15.90 |
| Prince Rupert | 1,383 | 5.69 | 5.66–15.08 | 122,174 | 9.53 | .55–13.52 | 97,362 | 11.91 | 1.10–26.58 | 463,572 | 2.67 | .55– 4.80 | 120,058 | 1.98 | .55–15.80 |
| Prince George | 5,425 | 8.29 | 1.10–17.60 | 6 | 1.32 | 1.10–15.60 | 119,634 | 1.85 | 1.10–25.30 | 285 | 1.10 | 1.10– | 29,493 | 1.10 | 1.10– 5.90 |
| Cariboo | 14,721 | 18.30 | 1.10–38.70 | ..... | ..... | ..... | 10,378 | 6.10 | 1.10–23.80 | ..... | ..... | ..... | 2,742 | 1.60 | 6.10– 8.20 |
| Kamloops | 26,422 | 4.17 | 1.10–33.80 | 4,470 | 2.47 | 1.10–17.20 | 84,249 | 1.47 | 1.10–17.90 | 7,372 | 1.10 | 1.10– | 38,368 | 1.10 | 1.10–12.70 |
| Nelson | 22,772 | 6.29 | 1.10–41.10 | 83,590 | 5.46 | 1.10–38.00 | 114,026 | 1.45 | 1.10–21.40 | 81,080 | 1.10 | 1.10–18.10 | 62,769 | 1.12 | 1.10–19.00 |
| All districts | 282,274 | 9.67 | 1.10–41.10 | 754,076 | 17.54 | .55–41.30 | 453,186 | 5.29 | 1.10–89.40 | 1,509,680 | 4.30 | .55–18.10 | 736,873 | 4.13 | .55–19.00 |

| Forest District | Lodgepole Pine | | | White Pine | | | Larch | | | Other Species | | | All Species | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit |
| | | $ | $ | | $ | $ | | $ | $ | | $ | $ | | $ | $ |
| Vancouver | 19 | 3.92 | 3.61–15.90 | 7,433 | 4.25 | 1.40– 6.20 | ..... | ..... | ..... | 61,922 | 22.04 | 1.70–39.20 | 2,293,112 | 10.29 | 1.40–89.40 |
| Prince Rupert | 5,635 | 1.14 | .55– 8.00 | 3,028 | 1.47 | .55–15.32 | ..... | ..... | ..... | 31,036 | 9.15 | .94–14.96 | 844,248 | 4.82 | .55–26.58 |
| Prince George | 6,648 | 1.12 | 1.10– 7.80 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 161,491 | 1.90 | 1.10–25.30 |
| Cariboo | 3,000 | 3.60 | 1.10–19.40 | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | ..... | 30,841 | 7.40 | 1.10–38.70 |
| Kamloops | 110,453 | 1.10 | 1.10–11.00 | 1,253 | 3.54 | 1.10–75.00 | 5,678 | 7.62 | 1.10–21.90 | 566 | 2.39 | 1.10–12.30 | 278,831 | 1.78 | 1.10–75.00 |
| Nelson | 83,045 | 1.10 | 1.10–19.00 | 9,301 | 14.64 | 1.10–81.10 | 13,286 | 6.35 | 1.10–31.40 | 691 | 4.14 | 1.10–18.10 | 470,560 | 2.63 | 1.10–81.10 |
| All districts | 208,800 | 1.14 | .55–19.40 | 21,015 | 8.41 | .55–81.10 | 18,964 | 6.73 | 1.10–31.40 | 94,215 | 17.54 | .94–39.20 | 4,079,083 | 7.34 | .55–89.40 |


Province of British Columbia
Ministry of Forests
SCALE – 1:3,500,000 (Approx.)
Kilometres 20 0 20 40 60 80 100 120 140 160 180 200 Kilometres
Miles 20 10 0 20 40 60 80 100 Miles
STATUS OF SUSTAINED-YIELD FORESTRY PROGRAMME
AS AT DECEMBER 31, 1977
PUBLIC SUSTAINED YIELD UNITS
P.S.Y.U.'s Inside Pulpwood Harvesting Areas
P.H.A.
No. 1 Prince George Pulp and Paper Limited
9. Big Valley
15. Carp
20. Crooked River
43. Naver
44. Nechako
52. Parsnip
71. Stuart Lake
77. Westlake
79. Willow River
No. 2 Kamloops Pulp & Paper Co. Ltd.
1. Adams
5. Barriere
6. Barton Hill
11. Botanie
23. Eagle
45. Nehalliston
46. Nicola
47. Niskonlith
49. North Thompson
59. Raft
63. Salmon Arm
64. Shuswap
70. Spallumcheen
No. 3 Northwood Pulp Limited
12. Bowron
37. Longworth
39. Monkman
55. Purden
61. Robson
No. 5 Cariboo Pulp & Paper Company Limited
17. Cottonwood
42. Narcosli
58. Quesnel Lake
No. 7 Intercontinental Pulp Company Ltd.
53. Peace
69. Takla
P.S.Y.U.'s Outside Pulpwood Harvesting Areas
2. Arrowhead
3. Ashnola
4. Babine
7. Bell-Irving
8. Big Bar
10. Blueberry
13. Burns Lake
14. Canoe
16. Chilko
18. Cranbrook
19. Creston
21. Dean
22. Dewdney
24. Edgewood
25. Fernie
26. Finlay
86. Fontas
87. Fort Nelson
29. Granby
30. Hecate
31. Kamloops
32. Kettle
33. Kinbasket
34. Kingcome
94. Kluskus
35. Lac La Hache
36. Lardeau
38. Moberly
40. Morice
41. Nakusp
48. Nootka
50. Okanagan
51. Ootsa
56. Quadra
57. Queen Charlotte
62. Salmo
65. Similkameen
66. Skeena
67. Slocan
69. Soo
72. Stum
74. Upper Kootenay
75. Vancouver
76. Wapiti
78. Williams Lake
80. Windermere
81. Yalakom
90. Kotcho
91. Liard
SPECIAL SALE AREAS
27. Fort St. James (O-I-C 1888/65)
28. Furry Creek (O-I-C 3909/67)
54. Prince George (O-I-C 2811/62)
TREE FARM LICENCES
T.F.L. No.
1. Canadian Cellulose Company, Limited
2. Crown Zellerbach Canada Limited
3. Triangle-Pacific Forest Products Ltd.
5. Weldwood of Canada Limited
6. Rayonier Canada (B.C.) Limited
7. MacMillan Bloedel Limited
8. Pope and Talbot Ltd.
9. Crown Zellerbach Canada Limited
10. Timberland Development Company Limited
12. Crown Zellerbach (Hardwicke Island) Limited
13. Galloway Lumber Company Limited
14. Crestbrook Forest Industries Ltd.
15. Northwood Properties Ltd.
16. Crown Zellerbach Canada Limited
17. British Columbia Forest Products Limited
18. Clearwater Timber Products Limited
19. Tahsis Company Ltd.
20. MacMillan Bloedel Industries Limited
21. MacMillan Bloedel Industries Limited
22. British Columbia Forest Products Limited
23. Canadian Cellulose Company, Limited
24. Rayonier Canada (B.C.) Limited
25. Rayonier Canada (B.C.) Limited
26. The Corporation of the District of Mission
27. British Columbia Forest Products Limited
30. Northwood Pulp and Timber Limited
32. Crown Zellerbach Canada Limited
33. Federated Co-Operatives Limited
35. Weyhaueser Canada Ltd.
36. British Columbia Forest Products Limited
37. Canadian Forest Products Ltd.
38. Empire Mills Limited
39. MacMillan Bloedel Limited
41. Eurocan Pulp and Paper Company Limited
MAJOR PARKS
RECREATION AREAS
WILDERNESS AREAS
Y U K O N
N.W.T.
B R I T I S H C O L U M B I A
P A C I F I C O C E A N
U.S.A.
Carcross
Watson Lake
Lower Post
Atlin
Skagway
Cassiar
Tulsequah
Juneau
Telegraph Creek
Sitka
Stewart
Alice Arm
Kitwanga
Hazelton
Dorreen
Pacific
Smithers
Telkwa
Terrace
Port Simpson
PRINCE RUPERT
Port Edward
Masset
Queen Charlotte
Tofino
Ucluelet
Port Alberni
Nanaimo
Duncan
VICTORIA
Port Angeles
Bella Coola
Bella Bella
Anahim Lake
Williams Lake
Quesnel
Prince George
Fort Nelson
Fort St. John
Dawson Creek
Chetwynd
Mackenzie
Germansen Landing
Manson Cr.
Tumbler Ridge
McLeod Lake
Takla Landing
Fort Fraser
Vanderhoof
Burns Lake
Houston
Topley
Rose Lake
Granisle
Kitimat
Stewart
Hanceville
Alexis Creek
Lac La Hache
100 Mile House
Clinton
Lillooet
Pemberton
Squamish
Whistler
Revelstoke
Golden
Field
Lake Louise
Banff
CALGARY
Radium Hot Springs
Invermere
Fernie
Elkford
Sparwood
Kimberley
Cranbrook
Creston
Nelson
Trail
Castlegar
Grand Forks
Greenwood
Kelowna
Penticton
Vernon
Salmon Arm
Kamloops
Merritt
Ashcroft
Cache Creek
Ashcroft
Lytton
Hope
Chilliwack
Abbotsford
Mission
Langley
New Westminster
Vancouver
North Vancouver
Powell River
Campbell River
Port Alberni
Tofino
Ucluelet
Port Hardy
Port McNeill
Alert Bay
Queen Charlotte
Masset
Prince Rupert
Port Simpson
Terrace
Kitimat
Stewart
Alice Arm
Kitwanga
Hazelton
Smithers
Telkwa
Dorreen
Pacific
Port Alberni
Nanaimo
Duncan
Victoria
Port Angeles
Bellingham
Anacortes
Rockport
Sidney
Ladysmith
Chemainus
Courtenay
Comox
Campbell River
Powell River
Sechelt
Gibsons
Squamish
Whistler
Pemberton
Lillooet
Ashcroft
Cache Creek
Clinton
100 Mile House
Lac La Hache
Williams Lake
Quesnel
Prince George
Mackenzie
Fort Nelson
Fort St. John
Dawson Creek
Chetwynd
Tumbler Ridge
Fort St. James
Vanderhoof
Burns Lake
Houston
Granisle
Kitimat
Stewart
Hazelton
Smithers
Telkwa
Terrace
Port Simpson
Prince Rupert
Port Edward
Masset
Queen Charlotte
Tofino
Ucluelet
Port Alberni
Nanaimo
Duncan
Victoria
Port Angeles
Bellingham
Anacortes
Rockport
Sidney
Ladysmith
Chemainus
Courtenay
Comox
Campbell River
Powell River
Sechelt
Gibsons
Squamish
Whistler
Pemberton
Lillooet
Ashcroft
Cache Creek
Clinton
100 Mile House
Lac La Hache
Williams Lake
Quesnel
Prince George
Mackenzie
Fort Nelson
Fort St. John
Dawson Creek
Chetwynd
Tumbler Ridge
Fort St. James
Vanderhoof
Burns Lake
Houston
Granisle
Kitimat
Stewart
Hazelton
Smithers
Telkwa
Terrace
Port Simpson
Prince Rupert
Port Edward
Masset
Queen Charlotte
Tofino
Ucluelet
Port Alberni
Nanaimo
Duncan
Victoria
Port Angeles
Bellingham
Anacortes
Rockport
Sidney
Ladysmith
Chemainus
Courtenay
Comox
Campbell River
Powell River
Sechelt
Gibsons
Squamish
Whistler
Pemberton
Lillooet
Ashcroft
Cache Creek
Clinton
100 Mile House
Lac La Hache
Williams Lake
Quesnel
Prince George
Mackenzie
Fort Nelson
Fort St. John
Dawson Creek
Chetwynd
Tumbler Ridge
Fort St. James
Vanderhoover

# MINISTRY OF FORESTS INVENTORY DIVISION

## UNIT SURVEYS 1961 +

COMPLETED (1961-74 Fieldwork)

1. Adams
3. Ashnola
4. Babine
5. Barriere
6. Barton Hill
7. Bell-Irving
9. Big Valley
10. Blueberry
11. Botanie
12. Bowron
14. Canoe
15. Carp
16. Chilko
17. Cottonwood
18. Cranbrook
19. Creston
20. Crooked River
21. Dean
23. Eagle
26. Finlay
27. Fort St. James S.S.A.
28. Furry Creek S.S.A.
29. Granby
30. Hecate
33. Kinbasket
34. Kingcome
35. Lac La Hache
36. Lardeau
37. Longworth
38. Moberly
39. Monkman
40. Morice
43. Naver
46. Nicola
47. Niskonlith
48. Nootka
49. North Thompson
52. Parsnip
53. Peace
54. Prince George S.S.A.
55. Purden
56. Quadra
57. Queen Charlotte
58. Quesnel Lake
59. Raft
60. Rivers Inlet
61. Robson
65. Similkameen
70. Spallumcheen
71. Stuart Lake
72. Stum
73. Takla
74. Upper Kootenay
75. Vancouver
76. Wapiti
78. Williams Lake
79. Willow River
82. Alsek Proposed
83. Boundary Proposed
84. Dawson Creek S.S.A. Proposed
85. Dease Proposed
86. Pontas
87. Fort Nelson
88. Kechika Proposed
89. Klappan Proposed
90. Kotcho
91. Liard
92. Sikanni
93. Stikine Proposed
94. Taku Proposed

## UNIT SURVEY RE-INVENTORY 1973 +

COMPLETED (1973-76 Fieldwork)

8. Big Bar
13. Burns Lake
22. Dewdney
25. Fernie
95. Kluskus
42. Narcosli
44. Nechako
45. Nehalliston
50. Okanagan
51. Ootsa
62. Salmo
63. Salmon Arm
64. Shuswap
66. Skeena
68. Smithers
69. Soo
77. Westlake
80. Windermere

IN PROGRESS (1977 Fieldwork)

2. Arrowhead
24. Edgewood
31. Kamloops
32. Kettle
41. Nakusp
67. Slocan
81. Yalakom

TREE FARM LICENCES
MAJOR PARKS
RECREATION AREAS
WILDERNESS AREAS

**Province of British Columbia**
Ministry of Forests

SCALE – 1:3,500,000 (Approx.)

Kilometres 20 0 20 40 60 80 100 120 140 160 180 200 Kilometres

Miles 20 10 0 20 40 60 80 100 Miles

PROGRESS OF FOREST-COVER MAPPING
BASED ON UNIT SURVEYS
OF AREAS UNDER PUBLIC MANAGEMENT
**AS AT DECEMBER 31, 1977**

*Table 15—Summary of Basic Data for Public Sustained-yield Units, 1977*

| Forest District and Unit Name | Date of Survey | Mature Volume (Cunits) | Productive Area (Acres) | | | Total Area (Including Nonforest Acres) | Allowable Annual Cut | Commitment (Cunits) | Volume Scaled (Cunits) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Mature | Immature | Total Productive (Includes NSR, NCC) | | | | |
| *Vancouver*[1] | | | | | | | | | |
| Dewdney | 1974 | 43,647,860 | 517,197 | 381,064 | 990,736 | 1,792,885 | 559,560 | 486,683 | 452,345 |
| Kingcome | 1966, 69, 71, 74 | 89,555,950 | 1,045,657 | 243,680 | 1,322,563 | 2,706,047 | 603,000 | 433,215 | 357,603 |
| Nootka | 1969 | 60,098,260 | 579,441 | 64,101 | 663,877 | 786,629 | 413,000 | 413,000 | 378,799 |
| Quadra | 1962, 66, 67, 68 | 49,153,860 | 561,777 | 682,917 | 1,336,518 | 2,855,229 | 776,000 | 752,545 | 647,986 |
| Soo | 1975 | 26,427,300 | 316,884 | 188,773 | 525,555 | 1,476,440 | 206,500 | 206,500 | 212,540 |
| Vancouver | 1970 | 13,279,340 | 135,920 | 152,269 | 319,576 | 550,367 | 179,240 | 122,077 | 113,243 |
| District totals | ..... | 282,162,570 | 3,156,876 | 1,712,804 | 5,158,825 | 10,167,597 | 2,737,300 | 2,414,020 | 2,162,516 |
| *Prince Rupert (Coast*[1]*)* | | | | | | | | | |
| Dean | 1962, 63, 68 | 62,424,590 | 881,134 | 80,045 | 968,273 | 3,916,986 | 517,080 | 203,144 | 100,286 |
| Hecate | 1964, 65 | 100,823,060 | 1,558,329 | 100,615 | 1,695,026 | 4,228,235 | 745,840 | 179,947 | 56,218 |
| Queen Charlotte | 1967 | 60,619,620 | 945,266 | 76,508 | 1,026,867 | 1,346,809 | 379,240 | 207,407 | 156,814 |
| Rivers Inlet | 1968 | 67,879,520 | 841,139 | 52,660 | 913,938 | 1,966,175 | 471,920 | 229,986 | 100,207 |
| District Subtotals | ..... | 291,746,790 | 4,225,868 | 309,828 | 4,604,104 | 11,458,205 | 2,114,080 | 820,484 | 413,525 |
| *Prince Rupert (Interior*[2]*)* | | | | | | | | | |
| Babine | 1974 | 37,136,390 | 1,057,695 | 397,114 | 1,582,527 | 2,098,082 | 423,500 | 221,142 | 304,854 |
| Bell Irving | 1973 | 18,147,930 | 279,081 | 14,871 | 326,576 | 1,580,988 | 125,000 | ..... | ..... |
| Burns Lake | 1964 | 14,011,060 | 411,810 | 529,850 | 991,529 | 1,125,044 | 264,030 | 264,030 | 336,914 |
| Morice | 1972 | 28,082,330 | 577,640 | 220,646 | 861,367 | 1,420,877 | 280,710 | 107,436 | 153,644 |
| Ootsa | 1965 | 42,201,300 | 1,112,636 | 850,873 | 2,006,822 | 2,658,653 | 632,780 | 505,799 | 170,702 |
| Skeena | 1961, 63, 66 | 102,637,680 | 1,668,059 | 390,298 | 2,124,385 | 3,924,708 | 1,006,591 | 458,552 | 457,857 |
| Smithers | 1976 | 31,643,984 | 759,351 | 246,077 | 1,019,938 | 1,439,369 | 315,110 | 223,042 | 263,448 |
| Subtotals | ..... | 273,860,674 | 5,866,272 | 2,649,729 | 8,913,144 | 14,247,721 | 3,047,721 | 1,780,001 | 1,687,419 |
| District totals | ..... | 565,607,464 | 10,092,140 | 2,959,557 | 13,517,248 | 25,705,926 | 5,161,801 | 2,600,485 | 2,100,944 |
| *Prince George*[2] | | | | | | | | | |
| Big Valley—Block 1 | 1969 | 7,219,620 | 156,251 | 16,222 | 183,653 | 199,645 | 83,304 | 82,195 | 156,553 |
| Blueberry | 1964 | 13,404,870 | 464,110 | 1,090,513 | 1,919,971 | 2,748,392 | 293,000 | 189,650 | 191,515 |
| Canoe | 1974 | 10,342,650 | 209,023 | 86,371 | 315,290 | 877,262 | 76,000 | 67,867 | 70,044 |
| Carp | 1973 | 32,074,080 | 672,293 | 555,401 | 1,293,397 | 1,486,602 | 419,500 | 291,113 | 298,183 |
| Crooked River | 1973 | 15,964,450 | 322,340 | 222,651 | 593,366 | 669,724 | 186,230 | 169,160 | 183,493 |
| Finlay | 1972 | 93,607,370 | 3,566,573 | 1,866,840 | 5,897,187 | 11,652,835 | 1,212,000 | 1,060,600 | 660,106 |

[1] 9.1″ + d.b.h.
[2] 7.1″ + d.b.h.

*Table 15—Summary of Basic Data for Public Sustained-yield Units, 1977*—Continued

| Forest District and Unit Name | Date of Survey | Mature Volume (Cunits) | Productive Area (Acres) | | | Total Area (Including Nonforest Acres) | Allowable Annual Cut | Commitment (Cunits) | Volume Scaled (Cunits) |
|---|---|---|---|---|---|---|---|---|---|
| | | | Mature | Immature | Total Productive (Includes NSR, NCC) | | | | |
| *Prince George*[2]—Continued | | | | | | | | | |
| Fontas | 1969, 70 | 3,302,310 | 100,405 | 734,933 | 1,079,038 | 2,699,016 | 159,800 | 77,990 | ..... |
| Fort Nelson | 1968 | 14,704,830 | 477,637 | 1,444,501 | 2,188,252 | 4,751,019 | 370,050 | 253,502 | 234,593 |
| Kluskus | 1975 | 11,886,760 | 442,611 | 338,182 | 781,591 | 952,807 | 120,500 | 63,825 | 94,978 |
| Kotcho | 1969, 70 | 3,902,420 | 145,403 | 1,865,709 | 3,079,616 | 5,513,175 | 92,700 | ..... | ..... |
| Liard | 1972, 73 | 46,140,920 | 1,831,848 | 1,806,479 | 4,287,324 | 7,505,413 | 480,700 | 144,035 | ..... |
| Longworth | 1971 | 31,980,410 | 742,778 | 72,015 | 853,565 | 1,215,095 | 295,030 | 230,235 | 185,688 |
| Moberly | 1970 | 20,738,420 | 700,688 | 650,821 | 1,491,486 | 1,889,393 | 292,719 | 135,209 | 71,756 |
| Monkman | 1966 | 23,751,650 | 693,610 | 32,716 | 747,086 | 1,353,615 | 205,340 | 116,560 | 56,216 |
| Naver | 1969 | 6,669,060 | 145,183 | 120,771 | 303,502 | 325,233 | 116,972 | 115,902 | 100,780 |
| Nechako | 1975 | 37,046,020 | 1,204,042 | 769,643 | 2,045,504 | 2,309,018 | 556,620 | 549,734 | 584,944 |
| Parsnip | 1965 | 22,973,290 | 787,082 | 166,187 | 1,097,919 | 1,475,932 | 221,620 | 216,370 | 216,049 |
| Peace | 1972 | 22,478,140 | 738,509 | 384,930 | 1,210,994 | 1,744,883 | 252,603 | 129,350 | 84,719 |
| Purden | 1967 | 16,269,520 | 417,234 | 74,842 | 533,282 | 590,461 | 174,540 | 167,074 | 263,412 |
| Robson | 1974 | 12,448,730 | 299,533 | 162,599 | 496,120 | 1,317,975 | 98,000 | 82,622 | 56,776 |
| Sikanni | 1971 | 1,188,803 | 631,083 | 1,753,210 | 2,617,630 | 4,792,926 | 250,070 | 66,554 | 15,482 |
| Stuart Lake | 1970 | 25,591,910 | 660,216 | 496,168 | 1,204,637 | 1,510,800 | 385,000 | 189,510 | 148,413 |
| Takla | 1970, 71 | 48,555,960 | 1,301,992 | 839,421 | 2,235,170 | 3,060,611 | 642,260 | 322,013 | 298,810 |
| Wapiti | 1969 | 17,486,360 | 609,329 | 1,290,137 | 2,111,420 | 2,871,553 | 367,315 | 104,053 | 90,985 |
| Westlake | 1975 | 11,880,590 | 329,557 | 181,843 | 553,842 | 588,028 | 162,000 | 162,000 | 133,872 |
| Willow River | 1969 | 6,293,540 | 140,441 | 126,129 | 301,273 | 319,807 | 119,130 | 118,062 | 95,274 |
| District totals | ..... | 557,902,683 | 17,789,771 | 17,149,234 | 39,422,115 | 64,421,220 | 7,633,003 | 5,105,185 | 4,292,641 |
| *Cariboo*[2] | | | | | | | | | |
| Big Bar (partial) | 1962 | 6,966,640 | 458,201 | 586,389 | 1,119,299 | 1,325,756 | 177,813 | 154,833 | 110,883 |
| Big Valley—Block 2 | 1969 | 6,006,970 | 147,818 | 24,417 | 182,483 | 192,945 | 69,390 | 68,550 | 94,681 |
| Bowron | 1967 | 4,013,430 | 93,993 | 49,179 | 150,686 | 168,773 | 52,020 | 51,604 | 102,438 |
| Chilko | 1966 | 28,648,690 | 1,463,453 | 1,546,439 | 3,120,920 | 5,134,347 | 253,327 | 20,666 | 577 |
| Cottonwood | 1969 | 14,319,160 | 312,522 | 105,217 | 452,808 | 480,242 | 208,250 | 208,250 | 162,519 |
| Lac la Hache | 1972 | 22,949,580 | 792,363 | 654,235 | 1,524,466 | 1,779,099 | 337,036 | 337,036 | 399,607 |
| Narcosli | 1974 | 24,916,820 | 1,093,842 | 863,651 | 2,009,482 | 2,176,973 | 399,400 | 384,014 | 410,581 |
| Quesnel Lake | 1971 | 40,952,460 | 898,012 | 542,380 | 1,536,854 | 2,073,296 | 523,600 | 370,976 | 351,003 |
| Stum | 1963, 66 | 23,196,240 | 1,490,927 | 1,471,337 | 3,049,404 | 3,590,698 | 317,161 | 315,231 | 310,182 |
| Williams Lake | 1973 | 12,383,090 | 371,645 | 227,843 | 671,381 | 747,169 | 155,400 | 143,112 | 270,933 |
| District totals | ..... | 184,353,080 | 7,122,776 | 6,071,087 | 13,817,783 | 17,669,298 | 2,493,397 | 2,054,272 | 2,213,404 |

| | | | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|
| *Kamloops*[2] | | | | | | | | | |
| Adams | 1968 | 9,463,770 | 225,311 | 246,190 | 496,335 | 584,686 | 146,000 | 146,000 | 200,947 |
| Ashnola | 1969 | 8,273,000 | 265,492 | 141,504 | 422,239 | 525,919 | 96,194 | 90,191 | 96,510 |
| Barriere | 1967 | 4,796,280 | 120,140 | 157,123 | 292,190 | 326,925 | 91,349 | 89,781 | 90,880 |
| Barton Hill | 1970 | 4,385,540 | 125,574 | 19,823 | 150,036 | 162,173 | 43,200 | 41,663 | 57,137 |
| Big Bar (partial)[3] | 1962 | 1,467,810 | 99,278 | 176,317 | 285,004 | 321,412 | ---------- | ---------- | 53,017 |
| Botanie | 1970 | 13,024,100 | 526,056 | 274,734 | 861,654 | 1,298,414 | 144,370 | 131,088 | 135,194 |
| Eagle | 1971 | 8,326,940 | 145,870 | 87,784 | 254,507 | 351,854 | 106,170 | 96,036 | 104,484 |
| Kamloops | 1968 | 6,191,360 | 284,335 | 333,818 | 678,963 | 805,980 | 117,298 | 117,298 | 119,903 |
| Nehalliston | 1973 | 5,968,250 | 174,152 | 160,477 | 347,849 | 390,372 | 100,000 | 100,000 | 135,266 |
| Nicola | 1970 | 10,282,250 | 370,429 | 353,464 | 815,533 | 950,883 | 137,359 | 134,494 | 135,876 |
| Niskonlith | 1968 | 3,420,670 | 95,632 | 165,003 | 277,225 | 295,057 | 87,940 | 80,451 | 76,292 |
| North Thompson | 1967 | 16,253,360 | 351,010 | 84,940 | 470,385 | 983,673 | 142,037 | 99,628 | 95,261 |
| Okanagan | 1975 | 15,246,450 | 491,293 | 531,859 | 1,057,630 | 1,269,087 | 235,000 | 216,178 | 326,012 |
| Raft | 1967 | 7,677,310 | 192,134 | 275,607 | 505,395 | 557,435 | 132,963 | 126,585 | 148,190 |
| Salmon Arm | 1975 | 1,620,230 | 43,646 | 122,106 | 179,126 | 223,080 | 48,000 | 34,665 | 44,856 |
| Shuswap | 1975 | 13,465,090 | 238,568 | 216,901 | 517,550 | 756,179 | 165,000 | 133,607 | 123,679 |
| Similkameen | 1969 | 14,640,930 | 347,392 | 379,260 | 781,706 | 872,515 | 248,116 | 226,175 | 239,960 |
| Spallumcheen | 1972 | 16,371,610 | 350,460 | 391,030 | 783,094 | 980,584 | 322,116 | 290,966 | 315,443 |
| Yalakom | 1965 | 17,431,570 | 489,603 | 386,217 | 906,808 | 1,838,356 | 231,751 | 180,689 | 129,479 |
| District totals | -------- | 178,306,520 | 4,936,375 | 4,504,157 | 10,083,229 | 13,494,584 | 2,594,863 | 2,335,495 | 2,628,386 |
| *Nelson*[2] | | | | | | | | | |
| Arrowhead | 1962 | 5,070,520 | 111,907 | 81,194 | 201,181 | 509,020 | 60,000 | 46,774 | 74,206 |
| Cranbrook | 1964 | 11,566,660 | 299,849 | 767,016 | 1,219,401 | 1,725,800 | 248,333 | 230,367 | 201,349 |
| Creston | 1973 | 4,508,450 | 122,347 | 362,296 | 516,499 | 678,721 | 103,000 | 103,000 | 99,087 |
| Edgewood | 1967 | 3,316,650 | 96,993 | 150,704 | 262,074 | 297,938 | 71,050 | 70,725 | 76,301 |
| Fernie | 1973 | 7,127,870 | 223,221 | 458,176 | 755,327 | 1,337,504 | 200,200 | 191,796 | 155,294 |
| Granby | 1967 | 3,687,370 | 96,684 | 382,180 | 504,008 | 643,186 | 115,712 | 88,106 | 70,065 |
| Kettle | 1963 | 5,175,690 | 189,863 | 510,428 | 763,124 | 822,487 | 145,375 | 135,466 | 112,556 |
| Kinbasket | 1968 | 23,533,800 | 409,753 | 328,076 | 787,514 | 2,287,243 | 310,250 | 256,566 | 218,083 |
| Lardeau | 1969 | 19,027,060 | 373,337 | 500,198 | 931,866 | 1,827,754 | 366,160 | 164,877 | 93,193 |
| Nakusp | 1967 | 3,967,070 | 81,502 | 93,546 | 192,992 | 311,847 | 62,929 | 49,199 | 62,875 |
| Salmo | 1974 | 3,206,220 | 72,341 | 351,277 | 449,664 | 630,029 | 124,494 | 103,212 | 96,679 |
| Slocan | 1967 | 3,423,440 | 84,076 | 197,572 | 301,981 | 517,862 | 86,505 | 55,684 | 60,640 |
| Upper Kootenay | 1965 | 12,136,370 | 343,012 | 371,207 | 757,244 | 1,260,615 | 166,505 | 166,505 | 178,343 |
| Windermere | 1974 | 4,636,520 | 132,787 | 231,148 | 377,796 | 806,237 | 68,400 | 64,826 | 76,223 |
| District totals | -------- | 110,383,690 | 2,637,672 | 4,785,018 | 8,020,671 | 13,656,243 | 2,128,913 | 1,727,103 | 1,574,894 |
| Totals for Province | -------- | 1,878,716,007 | 45,735,610 | 37,181,857 | 90,019,871 | 145,114,868 | 22,749,277 | 16,236,560 | 14,972,785 |

[1] 9.1″ + d.b.h.
[2] 7.1″ + d.b.h.
[3] *See* Cariboo for commitment and allowable annual cut.

*Table 16—Average Bid Stumpage Prices by Species and Forest Districts on Cutting Permits of Timber Sale Harvesting Licences and Timber Sales Issued During 1977 per Cunit Log Scale*

| Forest District | Douglas-fir | | | Cedar | | | Spruce | | | Hemlock | | | Balsam | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit |
| | | $ | $ | | $ | $ | | $ | $ | | $ | $ | | $ | $ |
| Vancouver | 344,917 | 12.42 | 1.10–82.00 | 554,718 | 18.07 | 1.10–90.00 | 69,956 | 6.47 | 1.10–30.00 | 1,026,448 | 3.96 | .70–92.00 | 607,355 | 4.28 | 1.10–67.00 |
| Prince Rupert (C.) | 8,278 | 3.83 | .55–20.00 | 85,267 | 7.26 | .55–24.70 | 74,875 | 7.03 | .55–28.00 | 190,671 | 3.25 | .55–13.00 | 50,622 | 4.45 | .55–13.00 |
| Prince Rupert (I.) | ..... | ..... | ..... | 28,838 | 10.54 | 1.10–35.00 | 318,596 | 3.20 | 1.10–33.00 | 271,580 | 2.04 | 1.10–33.00 | 255,782 | 1.37 | 1.10–33.00 |
| Prince George | 56,496 | 12.03 | 1.10–24.90 | 19,676 | 7.86 | 1.10– 4.50 | 1,886,690 | 4.18 | 1.10–17.40 | 13,840 | 1.10 | 1.10– 1.10 | 295,456 | 1.64 | 1.10–13.50 |
| Cariboo | 478,342 | 8.88 | 1.10–30.70 | 44,124 | 1.79 | 1.10– 7.20 | 539,983 | 3.04 | 1.10–23.00 | 1,327 | 1.10 | 1.10– 7.20 | 87,920 | 3.54 | 1.10–94.80 |
| Kamloops | 647,684 | 4.99 | 1.10–42.00 | 232,657 | 6.87 | 1.10–60.00 | 764,579 | 2.52 | 1.10–15.30 | 145,717 | 1.55 | 1.10–24.90 | 339,561 | 1.33 | 1.10–14.00 |
| Nelson | 223,966 | 4.12 | 1.10–36.40 | 176,187 | 6.97 | 1.10–36.70 | 424,384 | 1.46 | 1.10–37.00 | 151,791 | 1.42 | 1.10–36.70 | 196,393 | 1.12 | 1.10–36.70 |
| Totals for Province | 1,759,683 | 7.61 | .55–82.00 | 1,141,467 | 12.27 | .55–90.00 | 4,079,063 | 3.45 | .55–37.00 | 1,801,374 | 3.16 | .55–92.00 | 1,833,089 | 2.53 | .55–94.80 |

| Forest District | White Pine | | | Lodgepole Pine | | | Larch | | | Other Species | | | All Species | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit | Volume (Cunits) | Price per Cunit | Price Range per Cunit |
| | | $ | $ | | $ | $ | | $ | $ | | $ | $ | | $ | $ |
| Vancouver | 2,388 | 30.82 | 1.10–20.80 | 14,960 | 1.41 | .55–20.80 | ..... | ..... | ..... | 98,053 | 14.86 | 1.10–150.00 | 2,718,795 | 8.45 | .55–150.00 |
| Prince Rupert (C.) | ..... | ..... | ..... | 235 | 2.00 | .55–13.00 | ..... | ..... | ..... | 1,346 | 10.94 | .55– 15.70 | 425,294 | 5.15 | .55– 28.00 |
| Prince Rupert (I.) | ..... | ..... | ..... | 592,089 | 1.92 | 1.10–33.00 | ..... | ..... | ..... | 3,550 | 1.10 | 1.10– 33.00 | 1,470,435 | 2.29 | 1.10– 35.00 |
| Prince George | ..... | ..... | ..... | 1,035,559 | 2.40 | 1.10–17.20 | ..... | ..... | ..... | 804 | 1.10 | 1.10– 13.50 | 3,308,521 | 3.53 | 1.10– 24.90 |
| Cariboo | ..... | ..... | ..... | 1,234,060 | 1.44 | 1.10–23.00 | ..... | ..... | ..... | 413 | 1.65 | 1.10– 7.20 | 2,386,169 | 3.37 | 1.10– 94.80 |
| Kamloops | 17,189 | 22.17 | 1.10–50.00 | 760,641 | 1.73 | 1.10–24.80 | 16,499 | 8.93 | 1.10–46.70 | 32,783 | 5.77 | 1.10– 31.00 | 2,957,310 | 3.20 | 1.10– 60.00 |
| Nelson | 45,058 | 25.22 | 1.10–36.70 | 503,803 | 1.34 | 1.10–36.70 | 102,688 | 6.11 | 1.10–36.70 | 22,130 | 2.33 | 1.10– 36.70 | 1,846,400 | 3.08 | 1.10– 37.00 |
| Totals for Province | 64,635 | 24.61 | 1.10–50.00 | 4,141,347 | 1.79 | .55–36.70 | 119,187 | 6.50 | 1.10–46.70 | 173,079 | 10.81 | .55–150.00 | 15,112,924 | 4.19 | .55–150.00 |

*Table 17—Timber Cut and Billed From Timber Sales and Timber Sale Harvesting Licences, 1977*

| Forest District | Cunits | Board Feet | Lineal Feet | Cords | Posts | Car Stakes | Fence-rails, Palings | Slag Poles | Shingle Shakes | Shake Blanks |
|---|---|---|---|---|---|---|---|---|---|---|
| Vancouver | 2,261,868 | ..... | 40,488 | 2,758 | 3,522 | ..... | ..... | ..... | 3,470,335 | 24,919 |
| Prince Rupert (Coast) | 397,737 | ..... | 63,000 | 47 | 50 | 2,125 | ..... | ..... | 767,642 | ..... |
| Prince Rupert (Interior) | 1,563,548 | ..... | 157,143 | 175 | 7,644 | ..... | ..... | ..... | 305,820 | ..... |
| Prince George | 4,763,272 | ..... | ..... | 237 | 6,809 | ..... | ..... | ..... | 100,155 | ..... |
| Cariboo | 2,380,001 | ..... | 70,400 | 640 | 5,522 | 300 | ..... | ..... | 12,882 | ..... |
| Kamloops | 3,158,649 | ..... | 8,660 | 403 | 11,619 | 1,730 | ..... | ..... | ..... | ..... |
| Nelson | 2,364,044 | ..... | 21,152 | 1,262 | 65,179 | ..... | ..... | ..... | 568 | ..... |
| Totals, 1977 | 16,889,119 | ..... | 360,843 | 5,522 | 100,345 | 4,155 | ..... | ..... | 4,657,402 | 24,919 |
| Totals, 1976 | 13,731,411 | ..... | 172,791 | 5,900 | 68,078 | 950 | 14,368 | ..... | 2,954,787 | 4,687 |
| Totals, 1975 | 9,929,328 | ..... | 1,054,761 | 3,131 | 210,745 | 1,400 | 14,372 | ..... | 2,307,573 | 5,756 |
| Totals, 1974 | 10,354,644 | ..... | 1,215,860 | 3,271 | 324,083 | 2,100 | 18,927 | ..... | 3,278,183 | 16,950 |
| Totals, 1973 | 12,419,197 | ..... | 185,850 | 7,369 | 89,629 | 4,045 | 7,785 | ..... | 5,217,017 | 63,931 |
| Totals, 1972 | 10,592,009 | ..... | 390,014 | 3,815 | 35,322 | 1,547 | ..... | ..... | 4,281,398 | 100,252 |
| Totals, 1971 | 9,935,172 | 3,957,998 | 775,330 | 5,440 | 89,015 | 742 | ..... | ..... | 4,423,122 | 322,740 |
| Totals, 1970 | 9,004,256 | 9,699,203 | 1,918,009 | 4,327 | 36,720 | 1,253 | ..... | ..... | 4,379,241 | 866,431 |
| Totals, 1969 | 8,048,571 | 6,250,091 | 3,280,599 | 7,046 | 103,192 | 3,494 | 2,441 | 61,829 | 5,676,051 | 1,856.028 |
| Totals, 1968 | 7,143,846 | 6,416,864 | 3,862,509 | 7,819 | 172,642 | 3,751 | ..... | ..... | 4,369,011 | 1,133,289 |
| Ten-year average, 1968–77 | 10,804,755 | 2,632,416 | 1,321,657 | 5,364 | 122,977 | 2,344 | 5,789 | 6,183 | 4,154,378 | 439,498 |

*Table 18—Total Amount of Timber Scale Billed in British Columbia During the Years 1976 and 1977 (in Cunits)*

| Forest District | 10-year Average 1968–77 | 1976 | 1977 | Increase | Decrease | Net Increase |
|---|---|---|---|---|---|---|
| Vancouver | 8,319,402 | 9,732,729 | 8,600,829 | ..... | 1,131,900 | ..... |
| Prince Rupert (Coast) | 1,593,428 | 1,635,997 | 1,484,166 | ..... | 151,831 | ..... |
| Totals, Coast | 9,912,830 | 11,368,726 | 10,084,995 | ..... | 1,283,731 | ..... |
| Prince Rupert (Interior) | 1,324,284 | 1,460,641 | 1,920,180 | 459,539 | ..... | ..... |
| Prince George | 3,862,235 | 4,355,744 | 4,763,844 | 408,100 | ..... | ..... |
| Cariboo | 1,034,597 | 2,417,524 | 2,381,482 | ..... | 36,042 | ..... |
| Kamloops | 2,705,105 | 2,805,461 | 3,159,614 | 354,153 | ..... | ..... |
| Nelson | 1,966,035 | 2,143,006 | 2,399,514 | 256,508 | ..... | ..... |
| Totals, Interior | 10,892,256 | 13,182,376 | 14,624,634 | 1,478,300 | 36,042 | ..... |
| Grand totals | 20,805,086 | 24,551,102 | 24,709,629 | 1,478,300 | 1,319,773 | 158,527 |

*Table 19—Total Scale of All Products Billed in 1977 (in Cunits)*

(Segregated by land status and forest districts)

| Land Status | Vancouver | Prince Rupert (Coast) | Prince Rupert (Interior) | Prince George | Cariboo | Kamloops | Nelson | Total |
|---|---|---|---|---|---|---|---|---|
| Timber licences | 1,482,015 | 274,005 | ---------- | ---------- | ---------- | 22,122 | 32,597 | 1,810,739 |
| Timber berths | 87,274 | ---------- | ---------- | ---------- | ---------- | 54,285 | 33,882 | 175,441 |
| Timber leases | 242,890 | ---------- | ---------- | ---------- | ---------- | ---------- | ---------- | 242,890 |
| Pulp leases | 137,225 | 26,880 | ---------- | ---------- | ---------- | ---------- | ---------- | 164,105 |
| Pulp licences | 51,914 | 122,980 | ---------- | ---------- | ---------- | ---------- | ---------- | 174,894 |
| Farm wood-lots | 185 | ---------- | ---------- | 567 | 1,161 | 19 | 57 | 1,989 |
| Timber sales | 502,559 | 97,321 | 246,015 | 1,563,598 | 968,595 | 1,191,481 | 424,907 | 4,994,476 |
| Timber sale harvesting licences | 1,789,184 | 302,504 | 1,319,304 | 2,663,198 | 1,224,086 | 1,332,546 | 1,001,929 | 9,632,751 |
| Tree-farm licences | 2,314,332 | 563,666 | 280,681 | 161,780 | 30,478 | 278,580 | 474,776 | 4,104,293 |
| Beachcomb, trespass | 94,132 | 5,768 | 11 | ---------- | ---------- | ---------- | ---------- | 99,889 |
| Miscellaneous | 2,109 | ---------- | ---------- | 176,086 | 35,958 | 40,511 | 29,888 | 284,552 |
| Subtotals, Crown lands | 6,703,819 | 1,393,124 | 1,845,989 | 4,565,229 | 2,260,278 | 2,919,544 | 1,998,036 | 21,686,019 |
| Federal lands | 23,018 | ---------- | 6,136 | 4,546 | 2,429 | 13,533 | 1,240 | 50,902 |
| Crown grants to 1887 | 1,572,235 | 1,143 | ---------- | 151 | 1,346 | 58,887 | 85,297 | 1,719,059 |
| Crown grants 1887–1906 | 70,451 | 50,474 | ---------- | 117 | 2,706 | 9,603 | 140,146 | 273,497 |
| Crown grants 1906–1914 | 37,189 | 3,871 | 9,912 | 20,793 | 3,737 | 31,923 | 39,689 | 147,114 |
| Crown grants to date | 194,117 | 35,554 | 58,143 | 173,008 | 110,986 | 126,124 | 135,106 | 833,038 |
| Totals | 8,600,829 | 1,484,166 | 1,920,180 | 4,763,844 | 2,381,482 | 3,159,614 | 2,399,514 | 24,709,629 |

## *Table 20—Species Cut, All Products, 1977 (in Cunits)*

| Forest District | Fir | Cedar | Spruce | Lodgepole Pine | Hemlock | Balsam | White Pine |
|---|---|---|---|---|---|---|---|
| Vancouver | 1,438,141 | 1,785,525 | 129,654 | 481 | 3,279,747 | 1,678,960 | 38,415 |
| Prince Rupert (Coast) | 33,050 | 299,951 | 233,184 | 614 | 718,199 | 162,851 | 18 |
| Totals, Coast | 1,471,191 | 2,085,476 | 362,838 | 1,095 | 3,997,946 | 1,841,811 | 38,433 |
| Prince Rupert (Interior) | 44 | 40,582 | 439,506 | 751,501 | 346,348 | 319,123 | 3,021 |
| Prince George | 86,241 | 24,077 | 2,694,904 | 1,535,110 | 5,678 | 397,855 | 57 |
| Cariboo | 525,727 | 25,136 | 622,273 | 1,088,608 | 2,212 | 105,680 | ..... |
| Kamloops | 693,151 | 205,904 | 852,513 | 805,070 | 134,264 | 366,273 | 21,929 |
| Nelson | 218,971 | 345,931 | 665,175 | 498,444 | 205,601 | 294,806 | 46,374 |
| Totals, Interior | 1,524,134 | 641,630 | 5,274,371 | 4,678,733 | 694,103 | 1,483,737 | 71,381 |
| Grand totals | 2,995,325 | 2,727,106 | 5,637,209 | 4,679,828 | 4,692,049 | 3,325,548 | 109,814 |

| Forest District | Yellow Pine | Cypress | Larch | Hardwood | Cotton-wood | Unspeci-fied | Total |
|---|---|---|---|---|---|---|---|
| Vancouver | 120 | 219,251 | ..... | 6,716 | 20,491 | 3,328 | 8,600,829 |
| Prince Rupert (Coast) | ..... | 29,479 | ..... | 129 | 1,977 | 4,714 | 1,484,166 |
| Totals, Coast | 120 | 248,730 | ..... | 6,845 | 22,468 | 8,042 | 10,084,995 |
| Prince Rupert (Interior) | ..... | ..... | ..... | 390 | 7,222 | 12,443 | 1,920,180 |
| Prince George | 1 | ..... | 927 | 2,310 | 6,219 | 10,465 | 4,763,844 |
| Cariboo | 1,113 | ..... | ..... | 124 | 14 | 10,595 | 2,381,482 |
| Kamloops | 40,702 | 85 | 21,818 | 577 | 1,538 | 15,790 | 3,159,614 |
| Nelson | 8,413 | ..... | 105,300 | 82 | 751 | 9,666 | 2,399,514 |
| Totals, Interior | 50,229 | 85 | 128,045 | 3,483 | 15,744 | 58,959 | 14,624,634 |
| Grand totals | 50,349 | 248,815 | 128,045 | 10,328 | 38,212 | 67,001 | 24,709,629 |

## *Table 21—Acreage Logged, 1977*

| Forest District | Clear Cutting | Selective Cutting | Total |
|---|---|---|---|
| Vancouver | 76,372 | 1,383 | 77,755 |
| Prince Rupert | 47,439 | 3,634 | 51,073 |
| Prince George | 111,791 | 30 | 111,821 |
| Cariboo | 41,497 | 24,187 | 65,684 |
| Kamloops | 46,490 | 29,580 | 76,070 |
| Nelson | 41,860 | 10,508 | 52,368 |
| Totals, 1977 | 365,449 | 69,322 | 434,771 |
| Totals, 1976 | 329,322 | 58,560 | 387,882 |
| Totals, 1975 | 248,333 | 47,122 | 295,455 |
| Totals, 1974 | 323,324 | 44,488 | 367,812 |
| Totals, 1973 | 368,792 | 59,121 | 427,913 |
| Totals, 1972 | 328,553 | 48,005 | 376,558 |
| Totals, 1971 | 334,994 | 73,039 | 408,033 |

*Table 22—Total Scale of Christmas Trees Billed, 1970–77*

(Segregated by land status and forest districts)

| Year | Vancouver | | Prince Rupert | | Prince George | | Cariboo | | Kamloops | | Nelson | | Total | | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Private | Crown | Private | Crown | Private | Crown | Private | Crown | Private | Crown | Private | Crown | Private | Crown | |
| 1977 | 90,129 | 14,119 | ..... | 600 | 60 | 500 | 6,020 | 3,866 | 32,011 | 12,723 | 433,841 | 195,341 | 562,061 | 227,149 | 789,210 |
| 1976 | 77,554 | 7,217 | ..... | 495 | 444 | ..... | 9,558 | 23,680 | 35,360 | 12,290 | 496,343 | 217,072 | 619,259 | 260,754 | 880,013 |
| 1975 | 71,617 | 6,926 | ..... | 500 | 677 | ..... | 8,020 | 19,634 | 63,057 | 13,829 | 505,372 | 334,010 | 648,743 | 374,899 | 1,023,642 |
| 1974 | 85,413 | 4,124 | ..... | 500 | 645 | 800 | 12,860 | 31,486 | 76,884 | 10,709 | 557,240 | 210,764 | 733,042 | 258,383 | 991,425 |
| 1973 | 81,743 | 7,348 | ..... | ..... | 185 | ..... | 11,677 | 28,588 | 61,401 | 25,467 | 603,533 | 225,036 | 758,539 | 286,439 | 1,044,978 |
| 1972 | 72,067 | 10,985 | ..... | 500 | 3,868 | 280 | ..... | 3,366 | 34,883 | 66,716 | 457,940 | 367,056 | 568,758 | 448,903 | 1,017,661 |
| 1971 | 65,043 | 2,775 | 60 | 375 | 188 | 900 | ..... | ..... | 83,188 | 77,783 | 752,079 | 448,423 | 900,558 | 530,256 | 1,430,814 |
| 1970 | 77,662 | 2,130 | ..... | ..... | ..... | 100 | ..... | ..... | 152,578 | 103,083 | 822,322 | 455,865 | 1,052,562 | 561,178 | 1,613,740 |

*Table 23—Wood-processing Plants of the Province*

| Forest District | Operating | | | | | | | | Shut Down | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Sawmills | | | | Shingle-mills | | Number of Pulp-mills | Number of Veneer and Plywood Plants | Sawmills | | Shingle-mills | |
| | Number | Eight-hour Daily Production (Cunits) | Number of Attached Chippers | Number of Attached Barkers | Number | Eight-hour Daily Production (Cunits) | | | Number | Eight-hour Daily Production (Cunits) | Number | Eight-hour Daily Production (Cunits) |
| Vancouver | 166 | 16,556 | 143 | 103 | 80 | 1,548 | 12 | 14 | 62 | 67 | 12 | 43 |
| Prince Rupert | 92 | 3,910 | 27 | 18 | 6 | 256 | 4 | ------ | 135 | 729 | 2 | 64 |
| Prince George | 118 | 10,593 | 59 | 70 | 2 | 74 | 5 | 3 | 219 | 1,977 | 2 | 3 |
| Cariboo | 49 | 6,137 | 32 | 44 | 1 | 2 | 1 | 3 | 37 | 200 | 6 | 4 |
| Kamloops | 161 | 7,102 | 66 | 65 | 8 | 40 | 1 | 6 | 37 | 689 | ------ | ------ |
| Nelson | 119 | 4,693 | 38 | 35 | 17 | 695 | 2 | 5 | 76 | 580 | 3 | 5,011 |
| Totals, 1977 | 705 | 48,991 | 365 | 335 | 114 | 2,615 | 25 | 31 | 566 | 4,242 | 25 | 5,125 |
| Totals, 1976 | 659 | 49,895 | 365 | 326 | 99 | 1,835 | 25 | 30 | 543 | 4,816 | 25 | 84 |
| Totals, 1975 | 661 | 52,242 | 354 | 318 | 106 | 2,017 | 25 | 30 | 575 | 5,313 | 19 | 132 |
| Totals, 1974 | 787 | 45,541 | 326 | 304 | 103 | 1,615 | 25 | 27 | 495 | 6,889 | 14 | 74 |
| Totals, 1973 | 810 | 53,303 | 320 | 307 | 86 | 1,644 | 24 | 30 | 455 | 6,262 | 11 | 135 |
| Totals, 1972 | 603 | 45,962 | 305 | 272 | 74 | 1,601 | 23 | 30 | 506 | 5,723 | 28 | 94 |
| Totals, 1971 | 627 | 41,635 | 244 | 243 | 68 | 1,038 | 21 | 27 | 576 | 5,878 | 12 | 51 |
| Totals, 1970 | 881 | 40,531 | 230 | 202 | 59 | 909 | 20 | 24 | 322 | 3,084 | 9 | 29 |
| Totals, 1969 | 974 | 40,123 | 227 | 194 | 62 | 1,101 | 19 | 22 | 309 | 3,168 | 17 | 67 |
| Totals, 1968 | 902 | 39,079 | 186 | 164 | 59 | 1,207 | 19 | 22 | 332 | 3,933 | 13 | 48 |
| Ten-year average, 1968–77 | 761 | 45,730 | 292 | 266 | 83 | 1,558 | 23 | 27 | 468 | 4,931 | 17 | 584 |

*Table 24—Export of Logs, 1977 (in Cunits)*

| Species | Grade 1 | Grade 2 | Grade 3 | Ungraded and Lumber Reject | Total | Exportable[1] | Exported Under Permit[2] |
|---|---|---|---|---|---|---|---|
| Fir | 360 | 8,617 | 13,193 | ..... | 22,170 | 17,590 | 4,580 |
| Cedar | 1,442 | 2,034 | 7,537 | ..... | 11,013 | 4,003 | 7,010 |
| Spruce | 5,418 | 15,978 | 22,119 | ..... | 43,515 | 217 | 43,298 |
| Hemlock | 9,767 | 24,672 | 107,420 | ..... | 141,859 | 41,576 | 100,283 |
| Balsam | ..... | ..... | ..... | 69,982 | 69,982 | 15,343 | 54,639 |
| Lodgepole pine | 5 | 68 | 371 | ..... | 444 | 351 | 93 |
| Cypress | 2,280 | 10,988 | 59,096 | ..... | 72,364 | 16,503 | 55,861 |
| Hardwood | ..... | ..... | ..... | 3,444 | 3,444 | 2,485 | 959 |
| Cottonwood | ..... | 1 | 17 | ..... | 18 | 1 | 17 |
| Totals, 1977 | 19,272 | 62,358 | 209,753 | 73,426 | 364,809 | 98,069 | 266,740 |
| Totals, 1976 | 10,107 | 30,228 | 133,443 | 34,461 | 208,239 | 88,777 | 119,462 |
| Totals, 1975 | 12,066 | 29,820 | 98,397 | 9,843 | 150,126 | 73,447 | 76,679 |
| Totals, 1974 | 6,160 | 31,906 | 155,541 | 16,424 | 210,031 | 113,267 | 96,764 |
| Totals, 1973 | 1,547 | 6,380 | 32,747 | 6,834 | 47,508 | 32,680 | 14,828 |
| Totals, 1972 | 7,171 | 23,086 | 67,532 | 4,089 | 101,878 | 30,058 | 71,820 |
| Totals, 1971 | 28,743 | 60,942 | 168,171 | 23,244 | 281,100 | 46,304 | 234,796 |
| Totals, 1970 | 32,224 | 76,299 | 308,002 | 83,962 | 500,487 | 134,558 | 365,929 |
| Totals, 1969 | 5,988 | 30,313 | 172,708 | 50,403 | 259,412 | 106,553 | 152,859 |
| Totals, 1968 | 36,196 | 44,828 | 201,118 | 26,956 | 309,098 | 162,651 | 146,447 |
| Ten-year-average, 1968–77 | 15,947 | 39,616 | 154,741 | 32,964 | 243,269 | 88,636 | 154,632 |

[1] Export privilege—exported from lands Crown-granted prior to March 13, 1906.
[2] Exported under permit from Crown lands and lands granted after March 12, 1906, under authority of section 97 of the *Ministry of Forests Act*.

*Table 25—Exports From the Province of Other Forest Products, 1977*

| Forest District | Quantity Exported | Approximate Value F.O.B. | Where Marketed | | |
|---|---|---|---|---|---|
| | | | Canada | United States | Other Countries |
| Vancouver— | | $ | | | |
| Poles ... lin. ft. | 2,533,392 | 7,458,208.00 | 543,350 | 1,909,817 | 80,225 |
| Piling ... ,, | 67,290 | 201,870.00 | 58,780 | 8,510 | ... |
| Hop poles ... ,, | 11,790 | 12,969.00 | 11,790 | ... | ... |
| Cedar shakes ... pieces | 1,333,121 | 399,936.00 | 327,639 | 1,005,482 | ... |
| Fence-posts ... ,, | 14,788 | 25,879.00 | ... | 14,788 | ... |
| Pulp chips ... units, GPU | 617,946 | 20,392,218.00 | ... | 578,045 | 39,901 |
| Prince Rupert— | | | | | |
| Poles ... lin. ft. | 774,375 | 1,103,462.00 | 335,010 | 439,365 | ... |
| Piling ... ,, | 6,870 | 13,740.00 | 6,870 | ... | ... |
| Fence-posts ... ,, | 39,423 | 3,942.30 | ... | 39,423 | ... |
| Fence-posts ... pieces | 2,199 | 1,759.20 | ... | 2,199 | ... |
| Shake bolts ... cords | 983 | 294,900.00 | ... | 983 | ... |
| Shakes ... squares | 1,330 | 58,520.00 | 184 | 1,146 | ... |
| Shingles ... ,, | 9,935 | 437,140.00 | ... | 9,935 | ... |
| Prince George— | | | | | |
| Poles ... lin. ft. | 2,700 | 5,400.00 | 2,700 | ... | ... |
| Fence-posts ... pieces | 196,440 | 271,740.00 | 68,754 | 127,686 | ... |
| Cedar shakes ... squares | 1,551 | 69,795.00 | 543 | 1,008 | ... |
| Shake blanks ... cords | 1 | 350.00 | 1 | ... | ... |
| Shake bolts ... ,, | 1 | 260.00 | 1 | ... | ... |
| Fence rails ... pieces | 1,000 | 1,000.00 | 1,000 | ... | ... |
| Pulp chips ... units, BDU | 126,349 | 2,274,282.00 | 126,349 | ... | ... |
| ,, GPU | 2,422 | 93,611.00 | ... | 73 | 2,349 |
| Cariboo— | | | | | |
| Christmas trees ... pieces | 5,952 | 5,000.00 | 5,952 | ... | ... |
| Pulp chips ... units, BDU | 17,751 | 887,500.00 | ... | ... | 17,751 |
| Kamloops— | | | | | |
| Cedar shakes ... pieces | 2,360 | 590.00 | 1,336 | 1,024 | ... |
| Christmas trees ... ,, | 12,639 | 37,917.00 | 2,920 | 9,719 | ... |
| Fence-posts ... ,, | 440 | 2,200.00 | 440 | ... | ... |
| Fence rails ... ,, | 180 | 360.00 | 180 | ... | ... |
| Pulp chips ... units, BDU | 35,439 | 885,975.00 | 5,746 | ... | 29,693 |
| Nelson— | | | | | |
| Poles ... lin. ft. | 140,683 | 212,858.00 | 137,016 | 3,667 | ... |
| Corral rails ... ,, | 806,285 | 80,629.00 | 45,626 | 760,659 | ... |
| Orchard props ... ,, | 147 | 15.00 | ... | 147 | ... |
| Pickets ... ,, | 52,384 | 2,620.00 | 52,384 | ... | ... |
| Fence-posts ... ,, | 1,177,281 | 117,728.00 | 471,168 | 706,113 | ... |
| Fence-posts ... pieces | 130,809 | 143,900.00 | 52,352 | 78,457 | ... |
| Fence-posts ... cords | 872 | 87,200.00 | 349 | 523 | ... |
| Christmas trees ... pieces | 454,519 | 727,224.00 | 177,214 | 268,199 | 9,106 |
| Cedar shakes ... squares | 60,844 | 2,814,000.00 | 37,149 | 23,695 | ... |
| Shake blanks ... pieces | 222,800 | 44,560.00 | 220,800 | 2,000 | ... |
| Cordwood ... cords | 35 | 1,750.00 | 13 | 22 | ... |
| Shingle bolts ... ,, | 340 | 34,000.00 | 79 | 261 | ... |
| Mine timbers ... lin. ft. | 4,000 | 2,000.00 | ... | 4,000 | ... |
| Sawdust and shavings ... units, BDU | 9,021 | 27,063.00 | ... | 9,021 | ... |
| Pulp chips ... ,, BDU | 52,066 | 1,424,000.00 | ... | 52,066 | ... |
| Total value, 1977 | ... | 40,660,070.50 | ... | ... | ... |
| Total value, 1976 | ... | 29,241,771.00 | ... | ... | ... |

*Table 26—Unit Standard Reinventory Surveys, 1977 Field Work*

| Unit Name (PSYU) | Maps Classified | Number of Samples | Total Area (Hectares) |
|---|---|---|---|
| Arrowhead | 37 | 122 | 228 590 |
| Edgewood | 20 | 54 | 126 327 |
| Kamloops | 68 | 276 | 503 200 |
| Kettle | 46 | 166 | 376 058 |
| Nakusp | 19 | 79 | 133 445 |
| Slocan | 30 | 113 | 225 845 |
| Yalakom | 93 | 166 | 776 204 |
| Totals | 313 | 976 | 2 369 669 |

*Table 27—Production of Final Forest Cover Maps for 1976 Projects*

| Public Sustained-yield Unit | Number of Maps | Forest and Nonforest Area (Hectares) | | | Volume in Cubic Metres for Mature Crown Area (Close "U") |
|---|---|---|---|---|---|
| | | Crown | Alienated | Total | |
| Big Bar[1] | 89 | 666 586 | 90 062 | 756 648 | 23 883 660 |
| Burns Lake[1] | 67 | 455 290 | 38 987 | 494 277 | 39 674 838 |
| Ootsa | 135 | 1 082 202 | 42 824 | 1 125 026 | 129 680 600 |
| Skeena[1] | 214 | 1 588 275 | 60 018 | 1 648 293 | 290 637 070 |
| Smithers | 85 | 582 492 | 55 795 | 638 287 | 89 605 700 |
| Totals | 590 | 4 374 845 | 287 686 | 4 662 531 | 573 481 868 |

[1] Area and volume figures based on earlier surveys.

*Table 28—Uses of Crown Range, 1977*

| Grazing District | Grazing Permits | | | | | | Hay-cutting | | Grazing Special Use Permits | | Hectares of Usable Crown Range, Including Grazing SUP's |
|---|---|---|---|---|---|---|---|---|---|---|---|
| | Permit-tees | Permits Handled | Permitted Livestock | | | AUM's[1] Use of Crown Range | Permits | Tonnes | Permits | Hectares | |
| | | | Cattle | Horses | Sheep | | | | | | |
| Kamloops | 489 | 505 | 76,927 | 419 | 935 | 316,814 | ..... | ..... | 40 | 4 586 | 3 328 633 |
| Nelson | 283 | 304 | 17,631 | 599 | 12 | 71,374 | ..... | ..... | 14 | 1 292 | 578 308 |
| Prince George | 455 | 341 | 28,960 | 2,172 | 1,038 | 112,732 | 12 | 225 | 1 | 16 | 864 016 |
| Cariboo | 541 | 581 | 68,387 | 1,836 | ..... | 324,862 | 67 | 834 | 2 | 36 | 4 710 400 |
| Vancouver | 6 | 7 | 135 | ..... | ..... | 394 | ..... | ..... | ..... | ..... | 405 |
| Prince Rupert | 5 | ..... | ..... | 206 | ..... | 1,997 | 6 | 90 | ..... | ..... | 705,000 |
| Totals, 1977 | 1,779 | 1,738 | 192,040 | 5,232 | 1,985 | 828,173 | 85 | 1 149 | 57 | 5 930 | 10 186 762 |
| Totals, 1976 | 1,801 | 1,863 | 183,729 | 4,240 | 2,668 | 794,636 | 115 | 1 250 | 55 | 5 368 | 9 514 555 |
| Totals, 1975 | 1,727 | 1,912 | 181,117 | 4,907 | 882 | 787,406 | 155 | 1 931 | 56 | 5 322 | 9 514 575 |
| Totals, 1974 | ..... | 2,000 | 183,156 | 5,546 | 1,821 | 809,238 | ..... | ..... | ..... | ..... | ..... |
| Totals, 1973 | ..... | 1,920 | 177,785 | 5,748 | 1,616 | 783,677 | ..... | ..... | ..... | ..... | ..... |
| Totals, 1972 | ..... | 1,968 | 174,617 | 6,166 | 1,432 | 787,589 | ..... | ..... | ..... | ..... | ..... |
| Totals, 1971 | ..... | 1,920 | 178,772 | 6,186 | 1,484 | 829,337 | ..... | ..... | ..... | ..... | ..... |
| Totals, 1970 | ..... | 1,985 | 178,332 | 5,651 | 2,739 | 822,442 | ..... | ..... | ..... | ..... | ..... |
| Totals, 1969 | ..... | 2,018 | 180,579 | 5,545 | 5,106 | 837,405 | ..... | ..... | ..... | ..... | ..... |
| Totals, 1968 | ..... | 2,053 | 188,183 | 6,338 | 7,090 | 857,219 | ..... | ..... | ..... | ..... | ..... |

[1] AUM (animal unit month) is the equivalent of one mature cow for one month.

*Table 29—Fire Occurences by Months, 1977*

| Forest District | Mar. | Apr. | May | June | July | Aug. | Sept. | Oct. | Other | Total | Per Cent |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Vancouver | 0 | 6 | 20 | 50 | 55 | 107 | 12 | 4 | 0 | 254 | 13.7 |
| Prince Rupert | 0 | 4 | 20 | 27 | 27 | 57 | 14 | 3 | 0 | 152 | 8.2 |
| Prince George | 0 | 27 | 10 | 25 | 16 | 25 | 2 | 3 | 1 | 109 | 5.9 |
| Kamloops | 10 | 60 | 36 | 130 | 182 | 183 | 20 | 20 | 1 | 642 | 34.6 |
| Nelson | 3 | 84 | 9 | 47 | 138 | 180 | 17 | 5 | 7 | 490 | 26.4 |
| Cariboo | 1 | 13 | 13 | 33 | 31 | 108 | 3 | 4 | 1 | 207 | 11.2 |
| Totals | 14 | 194 | 108 | 312 | 449 | 660 | 68 | 39 | 10 | 1,854 | 100.0 |
| Per cent | 0.8 | 10.5 | 5.8 | 16.8 | 24.2 | 35.6 | 3.7 | 2.1 | 0.5 | 100.0 | ..... |
| Ten-year average | 15 | 84 | 318 | 366 | 661 | 673 | 177 | 67 | 4 | 2,365 | ..... |
| Per cent | 0.6 | 3.5 | 13.5 | 15.5 | 28 | 28.5 | 7.5 | 2.8 | 0.1 | 100.0 | ..... |

*Table 30—Number and Causes of Forest Fires, 1977*

| Forest District | Lightning | Recreational (Campers, Hunters, Fishermen, Etc.) | Railroads Operating | Smokers | Brush-burning (not Railway or Right-of-way Clearing) | Range-burning | Road, Power, Telephone, and Pipeline Construction | Industrial Operations (Logging, Etc.) | Incendiary | Miscellaneous Known Causes | Unknown Causes | Total | Per Cent of Total Fires in Province |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| Vancouver | 44 | 52 | 11 | 68 | 10 | 0 | 4 | 20 | 12 | 33 | 0 | 254 | 13.7 |
| Prince Rupert | 50 | 24 | 1 | 21 | 4 | 0 | 3 | 22 | 4 | 23 | 0 | 152 | 8.2 |
| Prince George | 33 | 10 | 4 | 8 | 7 | 14 | 6 | 8 | 8 | 10 | 1 | 109 | 5.9 |
| Kamloops | 176 | 76 | 29 | 123 | 24 | 9 | 6 | 60 | 24 | 112 | 3 | 642 | 34.6 |
| Nelson | 194 | 64 | 14 | 62 | 32 | 5 | 6 | 34 | 8 | 71 | 0 | 490 | 26.4 |
| Cariboo | 54 | 11 | 4 | 20 | 6 | 6 | 2 | 10 | 72 | 21 | 1 | 207 | 11.2 |
| Totals | 551 | 237 | 63 | 302 | 83 | 34 | 27 | 154 | 128 | 270 | 5 | 1,854 | ..... |
| Per cent | 29.7 | 12.8 | 3.4 | 16.3 | 4.5 | 1.8 | 1.5 | 8.3 | 6.9 | 14.5 | 0.3 | 100.0 | 100.0 |
| Ten-year average | 872 | 229 | 152 | 319 | 98 | 78 | 34 | 193 | 77 | 298 | 15 | 2,365 | ..... |
| Per cent | 37 | 9.7 | 6.4 | 13.5 | 4.1 | 3.3 | 1.4 | 8.2 | 3.2 | 12.6 | 0.6 | 100.0 | ..... |

*Table 31—Number and Causes of Forest Fires for the Last 10 Years*

| Causes | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | Total |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Lightning | 708 | 646 | 1,803 | 1,327 | 583 | 810 | 716 | 1,417 | 159 | 551 | 8,720 |
| Recreational (campers, hunters, fishermen, etc.) | 131 | 188 | 302 | 211 | 188 | 338 | 288 | 249 | 157 | 237 | 2,289 |
| Railroads operating | 121 | 238 | 246 | 175 | 136 | 218 | 147 | 113 | 57 | 63 | 1,514 |
| Smokers | 179 | 374 | 501 | 309 | 267 | 431 | 407 | 289 | 130 | 302 | 3,189 |
| Brush-burning (not railway or right-of-way clearing) | 65 | 133 | 146 | 129 | 70 | 145 | 102 | 83 | 24 | 83 | 980 |
| Range-burning | 53 | 128 | 191 | 105 | 59 | 78 | 34 | 42 | 56 | 34 | 780 |
| Road, power, telephone, and pipe-line construction | 34 | 52 | 30 | 50 | 44 | 38 | 36 | 25 | 5 | 27 | 341 |
| Industrial operations (logging, etc.) | 126 | 206 | 255 | 205 | 189 | 224 | 319 | 133 | 116 | 154 | 1,927 |
| Incendiary | 23 | 19 | 70 | 70 | 77 | 99 | 133 | 94 | 59 | 128 | 772 |
| Miscellaneous known causes | 193 | 313 | 432 | 303 | 277 | 462 | 355 | 252 | 127 | 270 | 2,984 |
| Unknown causes | 14 | 21 | 27 | 14 | 13 | 20 | 21 | 16 | 3 | 5 | 154 |
| Totals | 1,647 | 2,318 | 4,003 | 2,898 | 1,903 | 2,863 | 2,558 | 2,713 | 893 | 1,854 | 23,650 |

*Table 32—Fires Classified by Size and Timber Loss, 1977*

| Forest District | Total Fires | | Under 0.1 Hectare | | | 0.1 to 4.0 Hectares | | | Over 4 to 200 Hectares | | | Over 200 Hectares in Extent | | | Damage | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Number | Per Cent of Total Fires in Province | Number | Per Cent of Total Fires in District | Per Cent of Total Fires in This Class | Number | Per Cent of Total Fires in District | Per Cent of Total Fires in This Class | Number | Per Cent of Total Fires in District | Per Cent of Total Fires in This Class | Number | Per Cent of Total Fires in District | Per Cent of Total Fires in This Class | Under $100 | Between $100 and $1,000 | Over $1,000 |
| Vancouver | 254 | 13.7 | 235 | 92.5 | 14.1 | 18 | 7.1 | 10.6 | 1 | 0.4 | 5.6 | ..... | ..... | ..... | 247 | 2 | 5 |
| Prince Rupert | 152 | 8.2 | 136 | 89.5 | 8.2 | 13 | 8.6 | 7.6 | 3 | 2.0 | 16.7 | ..... | ..... | ..... | 143 | 3 | 6 |
| Prince George | 109 | 5.9 | 81 | 74.3 | 4.9 | 20 | 18.3 | 11.8 | 8 | 7.3 | 44.4 | ..... | ..... | ..... | 89 | 14 | 6 |
| Kamloops | 642 | 34.6 | 582 | 90.7 | 34.9 | 57 | 8.9 | 33.6 | 3 | 0.5 | 16.7 | ..... | ..... | ..... | 625 | 12 | 5 |
| Nelson | 490 | 26.4 | 441 | 90.0 | 26.5 | 47 | 9.6 | 27.6 | 2 | 0.4 | 11.0 | ..... | ..... | ..... | 478 | 5 | 7 |
| Cariboo | 207 | 11.2 | 191 | 92.3 | 11.4 | 15 | 7.2 | 8.8 | 1 | 0.5 | 5.6 | ..... | ..... | ..... | 203 | 1 | 3 |
| Totals | 1,854 | 100.0 | 1,666 | 89.9 | 100.0 | 170 | 9.2 | 100.0 | 18 | 1.0 | 100.0 | ..... | ..... | ..... | 1,785 | 37 | 32 |
| Per cent | 100.0 | ..... | 89.9 | ..... | ..... | 9.1 | ..... | ..... | 1.0 | ..... | ..... | ..... | ..... | ..... | 96.3 | 2.0 | 1.7 |
| Ten-year average | 2,365 | ..... | 1,464 | ..... | ..... | 682 | ..... | ..... | 184 | ..... | ..... | 35 | ..... | ..... | 2,086 | 161 | 118 |
| Per cent | 100.0 | ..... | 62 | ..... | ..... | 28.8 | ..... | ..... | 7.8 | ..... | ..... | 1.4 | ..... | ..... | 88.2 | 6.8 | 5.0 |

*Table 33—Loss of Property Other Than Forests, 1977*

| Forest District | Forest Products Cut, Logs, Lumber, Etc. | Buildings | Railway, Logging, and Sawmill Equipment | Miscellaneous | Total | Per Cent of Total |
|---|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ | |
| Vancouver | 43,293 | 8,000 | 27,400 | 2,200 | 80,893 | 46.6 |
| Prince Rupert | 7,991 | ..... | 450 | 100 | 8,541 | 4.9 |
| Prince George | 400 | 3,500 | 207 | 600 | 4,707 | 2.7 |
| Kamloops | 2,035 | 28,800 | 8,340 | 8,171 | 47,346 | 27.3 |
| Nelson | ..... | 17,000 | 2,800 | 150 | 19,950 | 11.5 |
| Cariboo | 1,200 | ..... | 900 | 10,000 | 12,100 | 7.0 |
| Totals | 54,919 | 57,300 | 40,097 | 21,221 | 173,537 | 100.0 |
| Per cent | 31.7 | 33.0 | 23.1 | 12.2 | 100.0 | ..... |
| Ten-year average | 177,145 | 131,580 | 94,560 | 55,170 | 458,455 | ..... |
| Per cent | 38.7 | 28.7 | 20.6 | 12.0 | 100.0 | ..... |

*Table 34—Damage to Forest Cover Caused by Forest Fires, 1977, Part I*

| Forest District | Merchantable Timber | | | | Immature Timber | |
|---|---|---|---|---|---|---|
| | Net Area Killed (ha) | Total Volume Killed ($m^3$) | Salvable Volume of Timber Killed ($m^3$) | Net Stumpage Loss | Net Area Killed (ha) | Present Value |
| | | | | $ | | $ |
| Vancouver | 72 | 20 876 | 10 125 | 104,178 | 10 | 29,869 |
| Prince Rupert | 134 | 29 036 | 15 425 | 10,660 | 67 | 26,786 |
| Prince George | 832 | 130 943 | 76 368 | 34,036 | 70 | 27,100 |
| Kamloops | 167 | 7 350 | 4 238 | 6,999 | 28 | 16,773 |
| Nelson | 50 | 5 023 | 1 562 | 10,151 | 29 | 20,562 |
| Cariboo | 72 | 10 030 | 7 678 | 3,093 | 49 | 52,107 |
| Totals | 1 326 | 203 258 | 115 396 | 169,117 | 253 | 173,197 |
| Per cent | 35.1 | 100.0 | 57.0 | 45.8 | 6.7 | 46.9 |
| Ten-year average | 14 449 | 3 096 965 | 1 317 206 | 2,076,752 | 18 238 | 1,403,703 |
| Per cent | 18.0 | 100.0 | 43.0 | 57.3 | 22.7 | 38.7 |

*Table 35—Damage to Forest Cover Caused by Forest Fires, 1977, Part II*

| Forest District | Not Satisfactorily Restocked | | | | Noncommercial Cover | | Grazing or Pasture Land | | Nonproductive Sites | | Under 4 Hectares | | Grand Totals | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | Logged, Not Burned (ha) | Logged and Burned (ha) | Old Burn Not Logged) (ha) | Damage | Area Burned (ha) | Damage | Area Burned (ha) | Damage | Area Burned (ha) | Damage | Area Burned (ha) | Damage | Area (ha) | Quantity ($m^3$) | Damage |
| | | | | $ | | $ | | $ | | $ | | $ | | | $ |
| Vancouver | 53 | ..... | ..... | 669 | 12 | 150 | ..... | ..... | 21 | 262 | 73 | 853 | 241 | 10 751 | 135,981 |
| Prince Rupert | 29 | 3 | ..... | 408 | ..... | ..... | 68 | 850 | ..... | 7 | 44 | 520 | 345 | 13 611 | 39,231 |
| Prince George | 115 | 12 | ..... | 1,595 | 87 | 1,094 | 30 | 375 | 157 | 1,973 | 351 | 4,365 | 1 654 | 54 575 | 70,538 |
| Kamloops | 14 | ..... | ..... | 181 | 24 | 300 | 129 | 1,616 | 23 | 296 | 234 | 2,763 | 618 | 3 112 | 28,928 |
| Nelson | 25 | 3 | ..... | 362 | 29 | 373 | 6 | 75 | 105 | 1,314 | 447 | 5,474 | 694 | 3 461 | 38,311 |
| Cariboo | 29 | ..... | ..... | 365 | ..... | ..... | ..... | ..... | 20 | 75 | 74 | 879 | 244 | 2 352 | 56,519 |
| Totals | 265 | 18 | ..... | 3,580 | 152 | 1,917 | 233 | 2,916 | 326 | 3,927 | 1,223 | 14,854 | 3 796 | 87 862 | 369,508 |
| Per cent | 7.0 | 0.5 | ..... | 0.9 | 4.0 | 0.5 | 6.2 | 0.8 | 8.2 | 1.1 | 32.3 | 4.0 | 100.0 | 43.2 | 100.0 |
| Ten-year average | 4 812 | 754 | 3 618 | 60,028 | 18 307 | 35,261 | 3 175 | 14,480 | 16 585 | 31,551 | 357 | 4,425 | 80 295 | 1 779 759 | 3,626,200 |
| Per cent | 6.0 | 0.9 | 4.5 | 1.7 | 22.8 | 0.9 | 3.9 | 0.4 | 20.7 | 0.9 | 0.4 | 0.1 | 100.0 | 57.5 | 100.0 |

*Table 36—Fire Causes, Area Burned, Forest Service Cost, and Total Damage, 1977*

| Causes | Number | Per Cent | Hectares | Per Cent | Cost | Per Cent | Damage | Per Cent |
|---|---|---|---|---|---|---|---|---|
| | | | | | $ | | $ | |
| Lightning | 551 | 29.7 | 289 | 7.7 | 1,469,898 | 43.2 | 58,114 | 10.7 |
| Recreational (campers, hunters, fishermen, etc.) | 237 | 12.8 | 225 | 5.9 | 222,962 | 6.5 | 11,302 | 2.1 |
| Railroads operating | 63 | 3.4 | 138 | 3.6 | 127,610 | 3.8 | 43,733 | 8.0 |
| Smokers | 302 | 16.3 | 332 | 8.8 | 438,507 | 12.9 | 85,180 | 15.7 |
| Brush-burning (not railway or right-of-way clearing) | 83 | 4.5 | 1 038 | 27.3 | 113,585 | 3.3 | 58,970 | 10.8 |
| Range-burning | 34 | 1.8 | 509 | 13.4 | 15,702 | 0.5 | 6,830 | 1.3 |
| Road, power, telephone, and pipeline construction | 27 | 1.5 | 69 | 1.8 | 27,660 | 0.8 | 27,359 | 5.0 |
| Industrial operations (logging, etc.) | 154 | 8.3 | 688 | 18.2 | 379,653 | 11.2 | 159,228 | 29.3 |
| Incendiary | 128 | 6.9 | 218 | 5.7 | 366,299 | 10.8 | 43,312 | 8.0 |
| Miscellaneous known causes | 270 | 14.5 | 160 | 4.2 | 201,398 | 5.9 | 48,138 | 8.9 |
| Unknown causes | 5 | 0.3 | 130 | 3.4 | 38,829 | 1.1 | 879 | 0.2 |
| Totals | 1,854 | 100.0 | 3 796 | 100.0 | 3,402,103 | 100.0 | 543,045 | 100.0 |

*Table 37—Comparison of Loss Caused by Forest Fires in Last 10 Years*

| | 1968 | 1969 | 1970 | 1971 | 1972 | 1973 | 1974 | 1975 | 1976 | 1977 | Total, 10 Years |
|---|---|---|---|---|---|---|---|---|---|---|---|
| Total number of fires | 1,647 | 2,318 | 4,003 | 2,898 | 1,903 | 2,863 | 2,558 | 2,713 | 893 | 1,854 | 23,650 |
| Area burned (hectares) | 13 519 | 164 739 | 105 688 | 351 890 | 26 087 | 33 422 | 21 728 | 24 911 | 57 020 | 3 796 | 802 800 |
| Standing timber destroyed or damaged (cubic metres) | 150 108 | 4 428 116 | 4 040 036 | 9 499 980 | 391 496 | 1 640 856 | 2 907 884 | 6 443 444 | 1 318 398 | 203 252 | 31 023 570 |
| Amount salvable (cubic metres) | 21 252 | 601 972 | 1 581 272 | 1 962 800 | 189 812 | 752 528 | 2 284 968 | 5 298 748 | 398 089 | 115 396 | 13 206 837 |
| | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ | $ |
| Damage to forests | 455,872 | 6,776,020 | 3,437,205 | 12,974,582 | 713,681 | 5,276,975 | 1,860,942 | 1,264,407 | 2,528,465 | 369,508 | 35,657,657 |
| Damage to other forms of property | 223,400 | 663,177 | 744,901 | 609,064 | 459,728 | 1,056,760 | 491,422 | 92,430 | 70,135 | 173,537 | 4,584,554 |
| Total damage | 679,272 | 7,439,197 | 4,182,106 | 13,583,646 | 1,173,409 | 6,333,735 | 2,352,364 | 1,356,837 | 2,598,600 | 543,045 | 40,242,211 |

*Table 38—Fires Classified by Forest District, Place of Origin, and Cost per Fire of Fire-fighting, 1977*

| Forest District | Total Fires | Total Forest Service Cost | | | Extinguished Without Cost | | | Cost Money to Extinguish | | | | | | | |
|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|---|
| | | Amount | Per Cent | Average Expenditure Per Cost Fire | Number | Per Cent of Total Fires in District | Per Cent of Total Fires in Province | Number | Per Cent of Total Fires in District | Per Cent of Total Fires in Province | Cost Less Than $100 per Fire | Cost $100 to $1,000 per Fire | Cost $1,000 to $5,000 per Fire | Cost $5,000 to $10,000 per Fire | Cost Over $10,000 per Fire |
| | | $ | | $ | | | | | | | | | | | |
| Vancouver | 254 | 750,679 | 22.1 | 3,950 | 64 | 25.2 | 3.5 | 190 | 74.8 | 10.2 | 12 | 106 | 33 | 19 | 20 |
| Prince Rupert | 152 | 198,267 | 5.8 | 1,943 | 50 | 32.9 | 2.7 | 102 | 67.1 | 5.5 | 5 | 47 | 33 | 10 | 7 |
| Prince George | 109 | 204,689 | 6.0 | 2,200 | 16 | 14.7 | 0.9 | 93 | 85.3 | 5.0 | 10 | 50 | 24 | 4 | 5 |
| Kamloops | 642 | 1,070,154 | 31.5 | 1,942 | 91 | 14.2 | 4.9 | 551 | 85.8 | 29.7 | 35 | 327 | 128 | 38 | 23 |
| Nelson | 490 | 675,171 | 19.8 | 1,662 | 84 | 17.1 | 4.5 | 406 | 82.9 | 21.9 | 34 | 241 | 91 | 23 | 17 |
| Cariboo | 207 | 503,143 | 14.8 | 2,908 | 34 | 16.4 | 1.8 | 173 | 83.6 | 9.3 | 11 | 78 | 56 | 18 | 10 |
| Totals | 1,854 | 3,402,103[1] | 100.0 | 2,245 | 339 | 18.3 | 18.3 | 1,515 | 81.7 | 81.7 | 107 | 849 | 365 | 112 | 82 |
| Per cent | 100.0 | ..... | ..... | ..... | 18.3 | ..... | ..... | 81.7 | ..... | ..... | 5.7 | 46.0 | 19.6 | 6.0 | 4.4 |
| Ten-year average | 2,365 | 5,073,758 | 100.0 | ..... | 440 | ..... | ..... | 1,925 | ..... | ..... | 646 | 736 | 359 | 81 | 103 |
| Per cent | 100.0 | ..... | ..... | ..... | 18.6 | ..... | ..... | 81.4 | ..... | ..... | 27.3 | 31.1 | 15.2 | 3.4 | 4.4 |

Cost to other parties (339 cost fires), $1,214,187. Cost to Forest Service (1,515 cost fires), $3,402,103.

[1] Cost correct to date; subject to later revision.

Detailed final costs are published one year in arrears in the table "Forest Protection Expenditures" in each Annual Report.

*Table 39—Forest Revenue, Fiscal Year 1976/77*

| | $ |
|---|---|
| Timber licence rentals and fees | 552,687.13 |
| Timber berth rentals and fees | 74,555.43 |
| Timber lease rentals and fees | 80,244.37 |
| Timber sale rentals and fees | 826,249.31 |
| Timber sale stumpage | 49,777,942.72 |
| Timber sale cruising and advertising | 188,810.88 |
| Timber royalties | 7,298,643.91 |
| Grazing permits and fees | 413,949.19 |
| Forest-protection tax | 1,333,155.62 |
| Miscellaneous | 1,119,201.34 |
| Weight-scaling | 4,504,859.16 |
| Coast scaling | 697,247.63 |
| Indian Affairs Agreement | 181,848.14 |
| TSHL fire-fighting costs, standby crews | 530,301.68 |
| Reservoir-waterway improvements | 1,156,783.01 |
| Total | 68,736,479.52 |

*Table 40—Forest Revenue, 1973–77*

| | 12 Months to Dec. 31, 1973 | 12 Months to Dec. 31, 1974 | 12 Months to Dec. 31, 1975 | 12 Months to Dec. 31, 1976 | 12 Months to Dec. 31, 1977 |
|---|---|---|---|---|---|
| | $ | $ | $ | $ | $ |
| Timber licence rentals and fees | 585,616.72 | 569,850.39 | 551,336.77 | 536,424.40 | 512,757.29 |
| Timber berth rentals and fees | 87,545.48 | 81,729.63 | 75,548.18 | 74,772.43 | 70,324.86 |
| Timber lease rentals and fees | 84,405.30 | 86,412.80 | 85,655.56 | 80,253.37 | 74,757.20 |
| Timber sale rentals and fees | 736,073.92 | 696,048.97 | 693,428.67 | 841,081.45 | 806,406.86 |
| Timber sale stumpage | 230,648,895.04 | 181,605,120.21 | 43,437,755.58 | 43,691,476.49 | 62,314,958.73 |
| Timber sale cruising and advertising | 132,227.44 | 144,040.10 | 113,492.20 | 199,208.82 | 275,650.62 |
| Timber royalties | 6,879,851.39 | 7,459,614.20 | 6,142,472.77 | 6,691,829.70 | 8,628,049.98 |
| Grazing permits and fees | 542,090.28 | 661,145.80 | 514,595.23 | 412,690.82 | 503,775.34 |
| Forest protection tax | 1,149,528.61 | 1,028,180.35 | 1,136,279.10 | 1,421,792.84 | 1,198,161.44 |
| Miscellaneous | 1,056,014.21 | 1,654,564.42 | 1,175,699.59 | 1,267,600.72 | 1,203,475.27 |
| Weight-scaling | 2,660,410.57 | 2,772,736.05 | 3,073,017.84 | 4,468,124.99 | 4,637,871.16 |
| Coast scaling | ..... | ..... | 175,202.08 | 2,067,742.02 | 587,913.39 |
| Indian Affairs Agreement | ..... | 151,585.78 | ..... | 181,848.14 | 143,357.00 |
| TSHL fire-fighting costs, standby crews | 282,596.87 | 283,095.50 | 651,038.38 | 775,716.72 | 163,909.94 |
| Wood products | ..... | ..... | 154,285.90 | 2,792.17 | ..... |
| Reservoir-water improvements | ..... | ..... | ..... | 305,101.00 | 2,378,800.00 |
| Totals | 244,845,255.83 | 197,200,142.26 | 57,979,807.85 | 63,018,456.08 | 83,500,169.08 |

*Table 41—Amounts Charged Against Logging Operations, Fiscal Year 1976/77*

| Forest District | Royalty | Miscel-laneous | Scaling Fund | | Stumpage | Rentals, Cruising, Advertising, Transfer Fees | Total |
|---|---|---|---|---|---|---|---|
| | | | Scaling Expenses | Scaling Fees | | | |
| | $ | $ | $ | $ | $ | $ | $ |
| Vancouver | 5,214,297.88 | 579,117.50 | 393,541.83 | 2,344,378.55 | 29,969,095.08 | 745,305.02 | 39,245,735.86 |
| Prince Rupert | 924,025.65 | 821,120.18 | 41,972.72 | 321,184.03 | 6,865,793.70 | 297,343.16 | 9,271,439.44 |
| Prince George | 193,018.59 | 1,116,511.75 | ..... | ..... | 4,259,719.59 | 381,170.34 | 5,950,420.27 |
| Kamloops | 243,582.01 | 1,022,723.00 | ..... | ..... | 2,947,793.01 | 207,174.50 | 4,421,272.52 |
| Nelson | 354,181.99 | 899,119.41 | ..... | ..... | 1,098,258.19 | 192,421.67 | 2,543,981.26 |
| Cariboo | 153,982.83 | 517,458.49 | ..... | ..... | 3,567,125.79 | 152,704.10 | 4,391,271.21 |
| Totals, 1976/77 | 7,083,088.95 | 4,956,050.33 | 435,514.55 | 2,665,562.58 | 48,707,785.36 | 1,976,118.79 | 65,824,120.56 |
| Totals, 1975/76 | 5,258,416.88 | 4,445,957.15 | 422,709.28 | 2,462,229.56 | 30,630,115.00 | 2,012,808.31 | 45,232,236.18 |
| Totals, 1974/75 | 8,954,769.20 | 4,251,752.40 | 569,292.49 | 2,539,384.43 | 115,853,196.88 | 2,004,181.95 | 134,172,577.35 |
| Totals, 1973/74 | 6,694,810.26 | 4,031,114.49 | 514,197.74 | 2,297,984.55 | 252,909,645.78 | 2,018,277.41 | 268,466,030.23 |
| Totals, 1972/73 | 5,696,871.79 | 2,755,671.01 | 435,656.63 | 2,179,338.81 | 135,091,040.33 | 1,883,747.01 | 148,042,325.58 |
| Totals, 1971/72 | 5,502,832.37 | 2,004,531.00 | 429,262.36 | 2,124,679.35 | 68,137,580.27 | 2,251,080.00 | 80,449,965.35 |
| Totals, 1970/71 | 5,508,498.13 | 1,717,910.69 | 382,501.42 | 1,999,070.86 | 45,558,857.31 | 1,914,268.47 | 57,081,106.88 |
| Totals, 1969/70 | 7,109,112.86 | 1,362,256.98 | 463,629.45 | 2,393,795.94 | 77,653,886.17 | 1,854,858.17 | 90,817,540.17 |
| Totals, 1968/69 | 5,606,697.44 | 531,812.86 | 430,176.61 | 1,813,633.15 | 57,086,138.53 | 2,053,320.31 | 67,521,778.90 |
| Totals, 1967/68 | 3,101,010.90 | 167,243.61 | 462,292.44 | 1,730,158.05 | 32,528,962.43 | 1,435,377.37 | 39,425,014.80 |

*Table 42—Amounts Charged Against Logging Operations, 1977*

| Forest District | Royalty | Miscel-laneous | Scaling Fund | | Stumpage | Rentals, Cruising, Advertising, Transfer Fees | Total |
|---|---|---|---|---|---|---|---|
| | | | Scaling Expenses | Scaling Fees | | | |
| | $ | $ | $ | $ | $ | $ | $ |
| Vancouver | 6,618,349.61 | 527,730.03 | 289,021.24 | 2,117,499.36 | 42,123,199.76 | 725,051.54 | 52,400,851.54 |
| Prince Rupert | 922,937.94 | 722,135.21 | 31,916.75 | 289,936.44 | 7,542,576.14 | 321,153.26 | 9,830,655.74 |
| Prince George | 247,515.47 | 1,333,360.17 | ..... | ..... | 5,694,504.18 | 378,242.48 | 7,653,622.30 |
| Kamloops | 326,734.16 | 939,713.20 | ..... | ..... | 2,283,584.37 | 249,482.96 | 3,799,514.69 |
| Nelson | 342,853.49 | 944,339.75 | ..... | ..... | 4,526,145.46 | 221,947.40 | 6,035,286.10 |
| Cariboo | 152,226.69 | 597,631.85 | ..... | ..... | 4,904,277.50 | 170,535.21 | 5,824,671.25 |
| Totals, 1977 | 8,610,617.36 | 5,064,910.21 | 320,937.99 | 2,407,435.80 | 67,074,287.41 | 2,066,412.85 | 85,544,601.62 |
| Totals, 1976 | 6,897,258.86 | 5,074,293.99 | 445,389.11 | 2,677,890.72 | 48,592,302.05 | 2,877,314.56 | 66,564,449.29 |
| Totals, 1975 | 6,074,174.55 | 4,438,210.28 | 454,867.22 | 2,380,053.72 | 28,389,508.35 | 1,989,319.46 | 43,726,133.58 |
| Totals, 1974 | 8,221,171.52 | 3,841,145.72 | 560,404.12 | 2,506,196.96 | 169,698,769.51 | 1,213,664.51 | 186,041,352.34 |
| Totals, 1973 | 6,804,683.59 | 3,876,214.24 | 506,980.82 | 2,385,179.87 | 251,777,437.15 | 1,917,706.24 | 267,268,201.91 |
| Totals, 1972 | 5,231,473.78 | 2,510,946.56 | 403,475.31 | 1,995,941.13 | 96,595,977.64 | 1,921,977.20 | 108,659,791.62 |
| Totals, 1971 | 5,519,236.50 | 1,930,657.09 | 423,107.49 | 2,107,899.80 | 55,347,358.35 | 2,341,636.62 | 67,669,895.85 |
| Totals, 1970 | 6,102,283.77 | 1,480,701.37 | 430,081.94 | 2,242,672.37 | 50,042,114.17 | 1,998,891.74 | 62,296,745.36 |
| Totals, 1969 | 6,394,215.18 | 1,335,288.66 | 417,010.41 | 2,046,118.14 | 80,270,727.23 | 1,900,578.27 | 92,363,937.89 |
| Totals, 1968 | 5,240,932.73 | 215,421.57 | 457,873.04 | 1,960,676.35 | 48,292,949.16 | 1,868,711.35 | 58,039,564.20 |

*Table 43—Forest Service Expenditures, Fiscal Year 1976/77*

| | $ |
|---|---|
| Minister's office | 28,528.19 |
| Departmental administration and support services program | 26,779,556.82 |
| Resource management program | 5,838,704.31 |
| Reforestation program | 19,211,915.79 |
| Research program | 2,245,090.54 |
| Fire suppression program | 4,783,975.07 |
| Forest protection program | 5,776,626.93 |
| Inventory program | 4,818,619.33 |
| Scaling program[1] | 7,987,920.28 |
| Range management program | 1,159,970.70 |
| Forest development roads program | 4,339,704.16 |
| Reservoir waterway improvement program | 4,861,223.08 |
| Forest advisory committee (SW 3) | 34,174.50 |
| Accelerated reforestation fund[1] | — |
| Total | 87,866,009.70 |

[1] *See* Tables 44 and 45.

*Table 44—Scaling Fund*

| | $ |
|---|---|
| Deficit, April 1, 1976 | 1,314,861.61 |
| Collections, April 1 – June 30, 1976 | 485,163.37 |
| | 829,698.24 |
| Expenditures, April 1 – June 30, 1976 | 980,616.19 |
| | 1,810,314.43 |
| Transferred from revenue to close out deficit balance of scaling fund June 30, 1976 | 1,810,314.43 |
| Balance, March 31, 1977 | *Nil* |

*Table 45—Accelerated Reforestation Fund*

| | |
|---|---|
| Surplus, April 1, 1976 | 1,476.69 |
| Expenditures, fiscal year 1976/77 | *Nil* |
| Surplus, March 31, 1977 | 1,476.69 |

Printed by K. M. MacDonald, Printer to the Queen's Most Excellent Majesty
in right of the Province of British Columbia.
1978

4M-678-6937